Agenda for the  
Regular Meeting of the  
Englewood City Council  
Tuesday, September 3, 2013  
7:30 pm  
Englewood Civic Center – Council Chambers  
1000 Englewood Parkway  
Englewood, CO  80110

1. Call to Order.

2. Invocation.

3. Pledge of Allegiance.

4. Roll Call.

5. Consideration of Minutes of Previous Session.  

6. Recognition of Scheduled Public Comment. (This is an opportunity for the public to address City Council. Council may ask questions for clarification, but there will not be any dialogue. Please limit your presentation to five minutes.)

7. Recognition of Unscheduled Public Comment. (This is an opportunity for the public to address City Council. Council may ask questions for clarification, but there will not be any dialogue. Please limit your presentation to three minutes. Time for unscheduled public comment may be limited to 45 minutes, and if limited, shall be continued to General Discussion.)

       Council Response to Public Comment

8. Communications, Proclamations, and Appointments.
9. Consent Agenda Items.
   a. Approval of Ordinances on First Reading.
      i. Council Bill No. 44 – Recommendation from the Utilities Department to approve a bill for an ordinance authorizing a Wastewater Connector’s Agreement with the Bow Mar Water and Sanitation District. **Staff Source:** Stewart H. Fonda, Director of Utilities.
      ii. Council Bill No. 45 – Recommendation from the Utilities Department to approve a bill for an ordinance authorizing a Wastewater Connector’s Agreement with Columbine Water and Sanitation District. **Staff Source:** Stewart H. Fonda, Director of Utilities.
      iii. Council Bill No. 46 – Recommendation from the Utilities Department to approve a bill for an ordinance approving Supplement #22 to the Connector’s Agreement with Valley Sanitation District authorizing the inclusion of land within the district. **Staff Source:** Stewart H. Fonda, Director of Utilities.
   b. Approval of Ordinances on Second Reading.
      i. Council Bill No. 41 – Recommendation from the Community Development Department to approve a bill for an ordinance authorizing the redemption and sale of 3685 South Fox Street.
   c. Resolutions and Motions.

10. Public Hearing Items. (No Public Hearings scheduled.)

11. Ordinances, Resolutions and Motions
   a. Approval of Ordinances on First Reading.
      i. Council Bill No. 21 – Recommendation from the Community Development Department to adopt a bill for an ordinance approving the proposed Navajo Apartments Planned Unit Development. Staff further recommends that Council set a Public Hearing for September 16, 2013 to gather public input on the proposed Planned Unit Development. **Staff Source:** Brook Bell, Planner II.
      ii. Council Bill No. 47 – Recommendation from the Utilities Department to adopt a bill for an ordinance approving the proposed 2013 Water Conservation Plan. **Staff Source:** Stewart H. Fonda, Director of Utilities.
   b. Approval of Ordinances on Second Reading.
      i. Council Bill No. 37, authorizing amendments to Title 16: Unified Development Code regarding distilleries, breweries and wineries.
ii. Council Bill No. 43, submitting to a vote of the registered electors of the City of Englewood at the next scheduled Municipal Election a proposed initiative relating to dedication of Park property.

c. Resolutions and Motions.

i. Recommendation from the Community Development Department to approve a resolution adopting the Englewood Light Rail Corridor Plan as a Supplementary Planning Document in support of Roadmap Englewood: The 2003 Englewood Comprehensive Plan. **Staff Source: John Voboril, Long Range Planner II.**

ii. Recommendation from the Littleton/Englewood Wastewater Treatment Plant Supervisory Committee to authorize, by motion, a professional services agreement with Brown and Caldwell for engineering support and design services for the Interim Disinfection Improvements Projects. **Staff Source: Stewart H. Fonda, Director of Utilities and Chong Woo, Engineering/Maintenance Manager.**

12. General Discussion.

a. Mayor’s Choice.

b. Council Members’ Choice.


15. Adjournment.
COUNCIL COMMUNICATION

Date: September 3, 2013
Agenda Item: 9 a i
Subject: Bow Mar Sanitation District Connector’s Agreement

INITIATED BY
Utilities Department

STAFF SOURCE
Stewart H. Fonda, Director of Utilities

COUNCIL GOAL AND PREVIOUS COUNCIL ACTION

City Council approved a standard Sanitary Sewer Connector’s Agreement in January, 1988.

RECOMMENDED ACTION

At their June 11, 2013 meeting the Englewood Water and Sewer Board recommended Council approval of the Bow Mar Sanitation District Wastewater Connector’s Agreement.

BACKGROUND, ANALYSIS, AND ALTERNATIVES IDENTIFIED

Sanitary sewer service is provided to districts outside of the Englewood corporate boundaries through the standard connector’s agreement. The Littleton/Englewood Wastewater Treatment Plant is able to receive and treat sewage transmitted by various districts. The attached agreement addresses this service with the district that owns and maintains the sewer mains.

In the Bow Mar Water and Sanitation District there are approximately 93 taps. The Bow Mar Sanitation District Sanitation District will continue to own the lines and will be responsible for capital improvements in its system. The attached map shows the Bow Mar Sanitation District boundaries.

The City Attorney’s office has reviewed and approved the standard Connector’s Agreement.

FINANCIAL IMPACT

None.

LIST OF ATTACHMENTS

Minutes from June 11, 2013 Water and Sewer Board Meeting
Minutes from July 9, 2013 Water and Sewer Board Meeting
Proposed Bill for an Ordinance
WATER & SEWER BOARD
MINUTES
TUESDAY, JUNE 11, 2013
5:00 P.M.

Present: Oakley, Wiggins, Habenicht, Waggoner, Moore, Woodward, Burns, Olson, Lay, Penn

Absent: None

Also present: Stu Fonda – Director of Utilities, Tom Brennan – Utilities Engineer

The meeting was called to order at 5:02.

1. MINUTES OF THE MAY 14, 2013 WATER BOARD MEETING.

The Board approved the Water and Sewer Board Minutes of the May 14, 2013 meeting. A correction in the May 14, 2013 Minutes was noted. Mr. Oakley was absent for this meeting.

Motion: To approve the May 14, 2013 Water and Sewer Board Minutes as amended.

Moved: Woodward
Seconded: Habenicht

Motion approved unanimously.

2. GUEST: JOE TOM WOOD – MARTIN & WOOD.
MEADOW CREEK RESERVOIR HISTORY.

Joe Tom Wood, Water Engineer of Martin & Wood, and associate Craig Lis appeared to discuss the Meadow Creek Reservoir history and its’ importance to the City of Englewood’s water supply system. Also discussed was the contractual relationship to Denver Water and projects at Meadow Creek.
The Board received a copy of, “A History of the Development of Englewood’s Cabin-Meadow Creek System by Joe Tom Wood.”

3. BOW MAR SANITATION DISTRICT CONNECTOR’S AGREEMENT.

Bow Mar Sanitation District submitted a standard connector’s agreement for receiving and treating sewage transmitted by the Bow Mar District. There are approximately 93 taps and the district will continue to own and maintain the sewer mains. The City Attorney’s office has reviewed and approved the standard Connector’s Agreement.

Motion: Recommend Council approval of the Bow Mar Sanitation District Wastewater Connector’s Agreement.

Moved: Waggoner Seconded: Penn

Motion passed unanimously.

4. ENGLEWOOD WATER CONSERVATION PLAN 30 DAY UPDATE & BUDGET.

Tom Brennan, Utilities Engineer, updated the Board on the Water Conservation Plan, comments received and budget.

5. UPDATE ON AMENDMENT #5 FOR UV PROJECT.

Tom Brennan, Utilities Engineer, updated the Board on the UV Project progress, an upcoming credit for Addendum #5 and the budget. A credit will be forthcoming on Addendum #5 because a tracer study was found to be not necessary. The project is 70% constructed with a target completion date of October, 2013.

6. MS4 STORMWATER PERMIT – ENGLEWOOD PUBLIC SCHOOLS.

The Board discussed having the Englewood Public Schools obtain a separate MS4 Stormwater Permit. With a permit separation, any stormwater violation from an illicit discharge by either party will not be reflected on the other entity.
The Director of Utilities and the City Manager will discuss obtaining a MS4 Permit with the Superintendent of Englewood Public Schools.

Motion: To notify Englewood Public Schools to apply for a separate MS4 Stormwater Permit.

Moved: Kells Seconded: Burns

Motion approved unanimously.

7. BOARD APPRECIATION NIGHT MONDAY, JUNE 24, 2013.

There will be an Englewood Board and Committee appreciation night on Monday, June 24, 2013 beginning at 6:00 in the City Hall Community Room.

The meeting adjourned at 6:10 p.m.

The next Englewood Water Board meeting will be Tuesday, July 9, 2013 at 5:00 p.m. in the Community Development Conference Room.

Respectfully submitted,

Cathy Burrage
Recording Secretary
Present: Oakley, Wiggins, Habenicht, Waggoner, Moore, Woodward, Burns, Olson, Lay Penn

Absent: None.

Also present: Stu Fonda, - Director of Utilities, Yasser Abouaish – City Engineer and John Bock – Utilities Manager

The meeting was called to order at 5:04 p.m.

1. MINUTES OF THE JUNE 11, 2013 MEETING.

The Board approved the Minutes of the June 11, 2013 Water Board Meeting.

Motion: To approve the June 11, 2013 Water and Sewer Board Minutes.

Moved: Habenicht Seconded: Oakley

Motion approved unanimously.

2. BIG DRY CREEK DRAINAGEWAY STUDY.

Mr. Dave Henderson, of the Public Works Department, appeared before the Board to review a request for $12,000 for Englewood’s portion of the Big Dry Creek Drainageway Study Master Plan initiated by the Southeast Metro Stormwater Authority.

The study is for identifying storm flows for future improvements, areas needing stabilization, floodplain management for future development and new mapping of flood hazard areas. Staff is requesting $12,000 be appropriated from the Stormwater Utility Fund.
Motion: To approve funding Englewood’s share of the Big Dry Creek Drainageway Study from the Stormwater Fund in the amount of $12,000.

Moved: Penn  Seconded: Moore

Motion approved unanimously.

3. ENGLEWOOD 2013 WATER CONSERVATION PLAN.

Mr. Abouaish reviewed the final draft of the 2013 Water Conservation Plan. The Board evaluated comments received during the 90-day review period. The recommendations submitted will not change the existing drafted water conservation plan, but will be included in the appendix and considered for implementation over the next five years. Englewood’s responses to the comments received will be included in the appendix. It was recommended that the responses be published in a future issue of the Pipeline.

Motion: To recommend Council approval of the 2013 Englewood Water Conservation Plan.

Motion: Burns  Seconded: Wiggins

Motion approved unanimously.

4. COLUMBINE WATER AND SANITATION DISTRICT CONNECTOR’S AGREEMENT.

Sanitary sewer service is provided to districts outside of the Englewood corporate boundaries through the standard connector’s agreement. Columbine Water and Sanitation District will continue to own the lines and will be responsible for capital improvements in its system. The City Attorney’s office has reviewed and approved the standard Connector’s Agreement.

Motion: To recommend Council approval of the Columbine Water and Sanitation District Connector’s Agreement.

Motion: Burns  Seconded: Lay

Motion approved unanimously.
5. **VALLEY SUPPLEMENT #22.**

A request was made by the Valley Sanitation District representing the owner/developer, MLATL Family LLLP for inclusion into the Valley Sanitation District. Supplement #22 is for an area approximately 3.53 acres. The zoning per Arapahoe County is I-2, General Commercial/Industrial. The proposed use of the property is for an office/warehouse with vehicle storage. MLATL is connected to Ralph Schomp Automotive. The property is located near W. Princeton Pl. and S. Federal Blvd. with an address of 4300 S. Federal Blvd.

Motion: To recommend Council approval of Valley Supplement #22.

Moved: Waggoner            Seconded: Lay

Motion approved unanimously.

6. **4344 S. WASHINGTON — ILLEGAL WATER TURN-ON.**

The Board discussed a water and sewer account at 4344 S. Washington. The owner has been repeatedly turned off for non-payment and has been turning the water back on themselves. City Code does provide authority to dig up in the street and disconnect at the corporation stop. The Board recommended that staff check the Utilities Department legal position and options with the City Attorney. Ms. Olson directed staff to go out to the property with the Englewood Impact Team to determine reason for non-payment. Options to digging up the street to disconnect were discussed. The Board will be updated at a future meeting.

Jim Woodward left at 5:40 p.m.

7. **EASEMENT VACATION — 5001 S. BROADWAY.**

The new property owner, Broadbell LLC, is requesting Englewood’s vacation of abandoned easements on the west side of their property at 5001 S. Broadway. The easements were deemed not necessary by the Utilities Engineer to service the existing improvements on the property. The termination of this easement will facilitate development of the property.

Motion: To recommend Council approval of the vacation of the abandoned utilities easements at 5001 S. Broadway for Broadbell LLC.

Moved: Waggoner            Seconded: Oakley

Motion passed unanimously.
8. MS4 PERMIT WITH ARAPAHOE SCHOOL DISTRICT 1.

The Board received a copy of the memo to Gary Sears dated June 19, 2013 regarding notifying the Arapahoe School District #1 of the one year notice to apply for its own MS4 Stormwater Permit. A meeting with The Director of Utilities, the City Manager and the Arapahoe School District #1 is set up for August 15.

9. SUPREME COURT RULING – LAWN IRRIGATION RETURN FLOWS.

The Colorado Supreme Court ruled against Englewood in the lawn irrigation return flows issue. Stu Fonda discussed how the ruling affects Englewood's water rights.

Adjourned 6:00 p.m.

The next Englewood Water Board meeting will be Tuesday, August 13, 2013 at 5:00 p.m. in the Community Development Conference Room.

Respectfully submitted,

Cathy Burrage
Recording Secretary

Please note: If you have a disability and need auxiliary aids or services, please notify the City of Englewood (303-762-2636) at least 48 hours in advance of when services are needed.
AN ORDINANCE AUTHORIZING AN INTERGOVERNMENTAL WASTEWATER CONNECTOR’S AGREEMENT BETWEEN BOW MAR WATER AND SANITATION DISTRICT AND THE CITY OF ENGLEWOOD, COLORADO.

WHEREAS, the City of Englewood owns and operates a sewage system, including a sewage treatment plant which is jointly owned and operated with the City of Littleton known as the L/E Wastewater Treatment Plant (WWTP); and

WHEREAS, the L/E WWTP provides sanitary sewer service to districts outside of the Englewood corporate boundaries through a standard connector’s agreement; and

WHEREAS, the Bow Mar Water and Sanitation District desires to utilize the L/E WWTP for treatment of the District’s sewage; and

WHEREAS, the Bow Mar Water and Sanitation District has approximately 93 taps; and

WHEREAS, the L/E WWTP is situated physically as to be able to receive and treat the sewage from a designated area served by the Bow Mar Water and Sanitation District and gathered by the District’s sanitary sewage system; and

WHEREAS, Bow Mar Water and Sanitation District will continue to own the lines and will be responsible for capital improvements and maintenance in its system; and

WHEREAS, the Englewood Water and Sewer Board reviewed and recommended approval of the Bow Mar Water and Sanitation District Wastewater Connector’s Agreement at the June 11, 2013 meeting;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ENGLEWOOD, COLORADO, AS FOLLOWS:

Section 1. The Intergovernmental Agreement between the City of Englewood and Bow Mar Water and Sanitation District entitled “Wastewater Connector’s Agreement For Districts” is hereby approved; a copy is attached hereto as Exhibit 1.

Section 2. The Mayor is authorized to execute and City Clerk to attest and seal the Intergovernmental “Wastewater Connector’s Agreement”, for and on behalf of the Englewood City Council.
Introduced, read in full, and passed on first reading on the 3rd day of September, 2013.

Published by Title as a Bill for an Ordinance in the City’s official newspaper on the 6th day of September, 2013.

Published as a Bill for an Ordinance on the City’s official website beginning on the 4th day of September, 2013 for thirty (30) days.

ATTEST:

Randy P. Penn, Mayor

Loucrishia A. Ellis, City Clerk

I, Loucrishia A. Ellis, City Clerk of the City of Englewood, Colorado, hereby certify that the above and foregoing is a true copy of a Bill for an Ordinance, introduced, read in full, and passed on first reading on the 3rd day of September, 2013.

Loucrishia A. Ellis
WASTEWATER CONNECTOR'S AGREEMENT
For Districts

Sewer Contract No. __________

THIS AGREEMENT, made and entered into this ______ day of ________, 20__ to be effective as of ________, 20__; by and between the CITY OF ENGLEWOOD, COLORADO, a municipal corporation, hereinafter referred to as "City," acting by and through its duly elected, qualified and authorized Mayor and City Clerk, and the BOW MAR WATER AND SANITATION DISTRICT, a quasi-municipal corporation and subdivision of the State of Colorado, hereinafter called "District," acting by and through its authorized Representative.

WITNESSETH

WHEREAS, the City owns and operates a sewage system, including a sewage treatment plant which is jointly owned and operated with the City of Littleton, so situated physically as to be able to receive and treat the sewage from a designated area served by the District and gathered by the District's sanitary-sewage system; and

WHEREAS, it is the desire of the District to utilize the facilities owned by the City for the treatment of sewage and the City is willing to serve the District for treatment of sewage under certain conditions;

NOW, THEREFORE, IN CONSIDERATION of the promises and for other good and valuable consideration hereinafter set forth, it is mutually agreed by the parties as follows:

1. The City hereby agrees under the conditions hereinafter set forth, to treat the sewage originating from the District's sanitary sewer system within the area served by the District as approved by the City and as indicated in the description attached hereto, incorporated herein and marked as "Exhibit A."

The District specifically agrees to prevent sewage from any area other than that described herein, from being discharged into the District's sanitary sewage system connected to the City's trunk line and to prevent connections to the system from or in any area other than those described herein.

2. In the operation of the District's sanitary sewer system, the District agrees that all applicable Code provisions and rules and regulations of the City, including amendments thereto during the term of the contract, shall be the minimum standards for the District's system. The District further agrees to abide by all applicable state and federal laws, rules, regulations, or permits, including those of the Environmental Protection Agency (the EPA) as they become effective or implemented or upon notice from the City. The District shall inform all users, contractors and subcontractors of such standards, rules and regulations upon inquiry from such persons, and shall not furnish any information inconsistent therewith. In this regard, it shall be the responsibility of the District to obtain the applicable requirements from the appropriate governing body. The City shall
attempt to maintain and provide information on all requirements to the District; however, the City does not guarantee the accuracy or completeness of government regulations other than the City’s own regulations.

3. Regarding the provision of sewer service, the City’s permitting requirements shall be followed by the District and its users. All sewer plans, specifications and methods of work within the District shall be submitted to the City in writing and approved by the City prior to any construction or tap in the District’s designated area. No permit shall be final and no service shall be provided to property until construction is approved, in writing by the City.

4. The District shall be responsible for the proper maintenance of its sewer system and shall rectify any problems or conditions which have been determined by the District or the City to be detrimental to the City’s treatment process or system. Should the City determine that any discharge enters the sewer system contrary to applicable laws, ordinances, statutes, rules, regulations or permits, the District agrees to proceed at once to take whatever lawful means may be necessary to rectify any such problem or condition.

5. The City shall have the right to allocate service under this Contract, and the City may deny additional service for any utility-related reason, but in no event will the City terminate or refuse any service without cause. The City shall have the right to disconnect service to any area annexed to the District when such annexation takes place without prior written City approval.

Within one year of this agreement, the District shall provide the City with an estimate of the number of equivalent service taps needed for the next five (5) years under current zoning and planned build out in the District’s area as shown on Exhibit A. The District shall continue to monitor zoning changes within its area to estimate its tap requirements and provide the City with notice of tap requirement for the next five (5) year period which time shall be given to the City on each anniversary date of this Agreement in a form satisfactory to the City.

6. The City may impose and collect reasonable fees, tolls and charges, which shall be uniform as to all outside-City users for the services provided by the City under this Connector’s Agreement.

The City shall bill the District users directly for all applicable City charges for services rendered under this Agreement. Should any user not pay the City, the City shall bill the District and the District shall pay the amount due to City within forty-five (45) days of such billing. These charges are subject to adjustment by the City from time to time. When such adjustment to these charges are made, the City shall give the District forty-five (45) days advance written notice.

The City may bill and collect “District Charges” imposed by the Districts as an additional item to be billed and collected by the City along with the City’s Treatment charge and other fees. The “District Charges” received by the City shall be remitted by the City to the District annually, less an amount equal to the City and District charges which remain delinquent. The District shall notify the City of any changes in the District charges to be imposed and the remittance schedule before May 1st of each year.
7. Subject to the terms of the Taxpayer’s Bill of Rights (TABOR), the term of this Agreement is for a period of three (3) years from the date of execution and automatically renewed for six (6) subsequent three (3) year periods unless either party gives a minimum of six (6) months written notice, during which time the District agrees that all effluent produced from taps within the District shall not be in violation of any federal, state or City laws, rules or regulations, or any other applicable governmental regulations or the permits under which the City operates its sewage treatment system. The City agrees, during the term hereof, to treat said effluent and to maintain adequate facilities for treating the same.

8. The District agrees that it will maintain, at its own expense, all lines now owned and operated by the District, it being specifically agreed that the City assumes no responsibility should any of the District’s lines become clogged, damaged, or require maintenance. The District shall, if it deems necessary, notify its users of the District’s procedure to remedy service disruption.

9. The City is providing only sewage treatment service and, pursuant thereto; any permits incidental to the use of the City’s sewage lines shall be governed only by this individual Contract with the District and the City does not, by this Contract, offer treatment service except in strict accordance with the terms hereof. This Contract does not offer, and shall not be construed as offering, sewage treatment service to the public generally or to any area outside the limits of the District’s service area described in Exhibit A.

10. This Contract may not be assigned, sold or transferred by the District without the City’s written consent.

11. Should any federal law, rule, permit or regulation or should a decree or order of a court render void or unenforceable any provision of this Contract, in whole or in part, the remainder shall remain in full force and effect.

12. The District shall enforce this Agreement and each of its terms and conditions within the area described in “Exhibit A.” The District shall refuse to serve a user or potential user; disconnect the service of any user pursuant to appropriate law; or take other appropriate action in the event of:

a. Nonpayment of such user of any charge made by the City for services;

b. Any violation or noncompliance by such user with the terms of this Agreement;

c. Any violation or noncompliance by such user with the applicable laws, rules, permits or regulations of the City, the United States government, including the EPA, the State of Colorado, the Department of Health, or other law, rule, permit or applicable regulation.

13. Continued breach of this Agreement by the District and/or its users shall be considered cause for the City to terminate this Agreement. Should the District fail to promptly rectify a breach of any provisions identified herein, after notice thereof, the City may take such steps and do such work as it deems necessary to enforce this Agreement, including litigation and specifically a right to injunction or specific performance against the District or any of its users as is necessary to protect the City’s system and operations.
The prevailing party shall be entitled to expenses and costs of suit, including attorney fees.

14. Should more than one district be connected to a sewer line, all districts on the sewer line who are in breach of this Agreement shall be jointly and severally liable for any such breach of this Agreement and each such district shall immediately, after notice, rectify any problem or condition detrimental to the treatment process arising within its legal boundaries. When more than one district is connected to a sewer line, and the City discovers any violation of the terms of this connector’s agreement; the City shall not be required to prove which district is at fault but shall make available to all such affected districts all information developed or accumulated by the City pertaining to such breach. Nothing contained herein shall preclude a claim for indemnity or contribution by any District against another District connected to a common sewer line. CRS-13-21-111.5, as amended shall govern the percentage of liability of any district on a common sewer line in the event the City seeks to impose liability based upon negligence or fault.

15. This Contract shall not be used as a legal defense or prohibition to the mandatory consolidation of facilities by either party as may be required by the laws of the State of Colorado of all existing sewer collection systems and facilities to a governmental entity created to assume responsibility for sewer service in the area in which both the City and State are a part under statutory or constitutional authority.

CITY OF ENGLEWOOD, COLORADO

__________________________________________, Mayor

ATTEST:

__________________________________________, City Clerk
BOW MAR WATER AND SANITATION DISTRICT

Bryan Sperry, President

STATE OF COLORADO  )
COUNTY OF Jefferson ) ss.

The foregoing instrument was acknowledged before me this 8th day of May, 2013, by ____________.

Witness my hand and official seal.

My Commission expires: 9/20/2015

Alyssa Quinn, Notary Public
COUNCIL COMMUNICATION

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<td>Columbine Water and Sanitation District Connector’s Agreement</td>
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INITIATED BY
Utilities Department

STAFF SOURCE
Stewart H. Fonda, Director of Utilities

COUNCIL GOAL AND PREVIOUS COUNCIL ACTION

City Council approved a standard Sanitary Sewer Connector’s Agreement in January, 1988.

RECOMMENDED ACTION

At their July 9, 2013 meeting the Englewood Water and Sewer Board recommended Council approval of the Columbine Water and Sanitation District Wastewater Connector’s Agreement.

BACKGROUND, ANALYSIS, AND ALTERNATIVES IDENTIFIED

Sanitary sewer service is provided to districts outside of the Englewood corporate boundaries through the standard connector’s agreement. The Littleton/Englewood Wastewater Treatment Plant is able to receive and treat sewage transmitted by various districts. The attached agreement addresses this service with the district that owns and maintains the sewer mains.

In the Columbine Water and Sanitation District there are 336 taps. The Columbine Water and Sanitation District will continue to own the lines and will be responsible for capital improvements in its system. The attached map shows the Columbine Water and Sanitation District boundaries.

The City Attorney’s office has reviewed and approved the standard Connector’s Agreement.

FINANCIAL IMPACT

None.

LIST OF ATTACHMENTS

Minutes from July 9, 2013 Water and Sewer Board meeting
Proposed Bill for an Ordinance
WATER & SEWER BOARD
MINUTES
TUESDAY, JULY 9, 2013

Present: Oakley, Wiggins, Habenicht, Waggoner, Moore, Woodward, Burns, Olson, Lay Penn
Absent: None.

Also present: Stu Fonda, - Director of Utilities, Yasser Abouaish – City Engineer and John Bock – Utilities Manager

The meeting was called to order at 5:04 p.m.

1. MINUTES OF THE JUNE 11, 2013 MEETING.

The Board approved the Minutes of the June 11, 2013 Water Board Meeting. 

Motion: To approve the June 11, 2013 Water and Sewer Board Minutes.

Moved: Habenicht Seconded: Oakley

Motion approved unanimously.

2. BIG DRY CREEK DRAINAGEWAY STUDY.

Mr. Dave Henderson, of the Public Works Department, appeared before the Board to review a request for $12,000 for Englewood’s portion of the Big Dry Creek Drainageway Study Master Plan initiated by the Southeast Metro Stormwater Authority.

The study is for identifying storm flows for future improvements, areas needing stabilization, floodplain management for future development and new mapping of flood hazard areas. Staff is requesting $12,000 be appropriated from the Stormwater Utility Fund.
Motion: To approve funding Englewood’s share of the Big Dry Creek Drainageway Study from the Stormwater Fund in the amount of $12,000.

Moved: Penn Seconded: Moore

Motion approved unanimously.

3. ENGLEWOOD 2013 WATER CONSERVATION PLAN.

Mr. Abouaish reviewed the final draft of the 2013 Water Conservation Plan. The Board evaluated comments received during the 90-day review period. The recommendations submitted will not change the existing drafted water conservation plan, but will be included in the appendix and considered for implementation over the next five years. Englewood’s responses to the comments received will be included in the appendix. It was recommended that the responses be published in a future issue of the Pipeline.

Motion: To recommend Council approval of the 2013 Englewood Water Conservation Plan.

Motion: Burns Seconded: Wiggins

Motion approved unanimously.

4. COLUMBINE WATER AND SANITATION DISTRICT CONNECTOR’S AGREEMENT.

Sanitary sewer service is provided to districts outside of the Englewood corporate boundaries through the standard connector’s agreement. Columbine Water and Sanitation District will continue to own the lines and will be responsible for capital improvements in its system. The City Attorney’s office has reviewed and approved the standard Connector’s Agreement.

Motion: To recommend Council approval of the Columbine Water and Sanitation District Connector’s Agreement.

Motion: Burns Seconded: Lay

Motion approved unanimously.
5. VALLEY SUPPLEMENT #22.

A request was made by the Valley Sanitation District representing the owner/developer, MLATL Family LLLP for inclusion into the Valley Sanitation District. Supplement #22 is for an area approximately 3.53 acres. The zoning per Arapahoe County is I-2, General Commercial/Industrial. The proposed use of the property is for an office/warehouse with vehicle storage. MLATL is connected to Ralph Schomp Automotive. The property is located near W. Princeton Pl. and S. Federal Blvd. with an address of 4300 S. Federal Blvd.

Motion: To recommend Council approval of Valley Supplement #22.

Moved: Waggoner Seconded: Lay

Motion approved unanimously.

6. 4344 S. WASHINGTON — ILLEGAL WATER TURN-ON.

The Board discussed a water and sewer account at 4344 S. Washington. The owner has been repeatedly turned off for non-payment and has been turning the water back on themselves. City Code does provide authority to dig up in the street and disconnect at the corporation stop. The Board recommended that staff check the Utilities Department legal position and options with the City Attorney. Ms. Olson directed staff to go out to the property with the Englewood Impact Team to determine reason for non-payment. Options to digging up the street to disconnect were discussed. The Board will be updated at a future meeting.

Jim Woodward left at 5:40 p.m.

7. EASEMENT VACATION — 5001 S. BROADWAY.

The new property owner, Broadbell LLC, is requesting Englewood’s vacation of abandoned easements on the west side of their property at 5001 S. Broadway. The easements were deemed not necessary by the Utilities Engineer to service the existing improvements on the property. The termination of this easement will facilitate development of the property.

Motion: To recommend Council approval of the vacation of the abandoned utilities easements at 5001 S. Broadway for Broadbell LLC.

Moved: Waggoner Seconded: Oakley

Motion passed unanimously.
8. MS4 PERMIT WITH ARAPAHOE SCHOOL DISTRICT 1.

The Board received a copy of the memo to Gary Sears dated June 19, 2013 regarding notifying the Arapahoe School District #1 of the one year notice to apply for its own MS4 Stormwater Permit. A meeting with The Director of Utilities, the City Manager and the Arapahoe School District #1 is set up for August 15.

9. SUPREME COURT RULING – LAWN IRRIGATION RETURN FLOWS.

The Colorado Supreme Court ruled against Englewood in the lawn irrigation return flows issue. Stu Fonda discussed how the ruling affects Englewood’s water rights.

Adjourned 6:00 p.m.

The next Englewood Water Board meeting will be Tuesday, August 13, 2013 at 5:00 p.m. in the Community Development Conference Room.

Respectfully submitted,

Cathy Burrage
Recording Secretary

Please note: If you have a disability and need auxiliary aids or services, please notify the City of Englewood (303-762-2636) at least 48 hours in advance of when services are needed.
ORDINANCE NO. __________ SERIES OF 2013
COUNCIL BILL NO. 45
INTRODUCED BY COUNCIL MEMBER __________

A BILL FOR

AN ORDINANCE AUTHORIZING AN INTERGOVERNMENTAL WASTEWATER CONNECTOR’S AGREEMENT BETWEEN COLUMBINE WATER AND SANITATION DISTRICT AND THE CITY OF ENGLEWOOD, COLORADO.

WHEREAS, the City of Englewood owns and operates a sewage system, including a sewage treatment plant which is jointly owned and operated with the City of Littleton known as the L/E Wastewater Treatment Plant (WWTP); and

WHEREAS, the L/E WWTP provides sanitary sewer service to districts outside of the Englewood corporate boundaries through a standard connector’s agreement; and

WHEREAS, the Columbine Water and Sanitation District desires to utilize the L/E WWTP for treatment of the District’s sewage; and

WHEREAS, the Columbine Water and Sanitation District has approximately 336 taps; and

WHEREAS, the L/E WWTP is situated physically as to be able to receive and treat the sewage from a designated area served by the Columbine Water and Sanitation District and gathered by the District’s sanitary sewage system; and

WHEREAS, Columbine Water and Sanitation District will continue to own the lines and will be responsible for capital improvements and maintenance in its system; and

WHEREAS, the Englewood Water and Sewer Board reviewed and recommended approval of the Columbine Water and Sanitation District Wastewater Connector’s Agreement at the July 9, 2013 meeting;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ENGLEWOOD, COLORADO, AS FOLLOWS:

Section 1. The Intergovernmental Agreement between the City of Englewood and Columbine Water and Sanitation District entitled “Wastewater Connector’s Agreement For Districts” is hereby approved; a copy is attached hereto as Attachment 1.

Section 2. The Mayor is authorized to execute and City Clerk to attest and seal the Intergovernmental “Wastewater Connector’s Agreement”, for and on behalf of the Englewood City Council.
Introduced, read in full, and passed on first reading on the 3rd day of September, 2013.

Published by Title as a Bill for an Ordinance in the City’s official newspaper on the 6th day of September, 2013.

Published as a Bill for an Ordinance on the City’s official website beginning on the 4th day of September, 2013 for thirty (30) days.

ATTEST:

Randy P. Penn, Mayor

Loucrishia A. Ellis, City Clerk

I, Loucrishia A. Ellis, City Clerk of the City of Englewood, Colorado, hereby certify that the above and foregoing is a true copy of a Bill for an Ordinance, introduced, read in full, and passed on first reading on the 3rd day of September, 2013.

Loucrishia A. Ellis
WASTEWATER
CONNECTOR’S AGREEMENT
For Districts

Sewer Contract No. _________

THIS AGREEMENT, made and entered into this ________ day of ____________________________, 20___ to be effective as of ________________, 20___; by and between the CITY OF ENGLEWOOD, COLORADO, a municipal corporation, hereinafter referred to as “City,” acting by and through its duly elected, qualified and authorized Mayor and City Clerk, and the COLUMBINE VALLEY WATER AND SANITATION DISTRICT, a quasi-municipal corporation and subdivision of the State of Colorado, hereinafter called “District,” acting by and through its authorized Representative.

WITNESSETH

WHEREAS, the City owns and operates a sewage system, including a sewage treatment plant which is jointly owned and operated with the City of Littleton, so situated physically as to be able to receive and treat the sewage from a designated area served by the District and gathered by the District’s sanitary-sewage system; and

WHEREAS, it is the desire of the District to utilize the facilities owned by the City for the treatment of sewage and the City is willing to serve the District for treatment of sewage under certain conditions;

NOW, THEREFORE, IN CONSIDERATION of the promises and for other good and valuable consideration hereinafter set forth, it is mutually agreed by the parties as follows:

1. The City hereby agrees under the conditions hereinafter set forth, to treat the sewage originating from the District’s sanitary sewer system within the area served by the District as approved by the City and as indicated in the description attached hereto, incorporated herein and marked as “Exhibit A.”

The District specifically agrees to prevent sewage from any area other than that described herein, from being discharged into the District’s sanitary sewage system connected to the City’s trunk line and to prevent connections to the system from or in any area other than those described herein.

2. In the operation of the District’s sanitary sewer system, the District agrees that all applicable Code provisions and rules and regulations of the City, including amendments thereto during the term of the contract, shall be the minimum standards for the District’s system. The District further agrees to abide by all applicable state and federal laws, rules, regulations, or permits, including those of the Environmental Protection Agency (the EPA) as they become effective or implemented or upon notice from the City. The District shall inform all users, contractors and subcontractors of such standards, rules and regulations upon inquiry from such persons, and shall not furnish any information inconsistent therewith. In this regard, it shall be the responsibility of the District to obtain the applicable requirements from the appropriate governing body. The City shall
3. Regarding the provision of sewer service, the City’s permitting requirements shall be followed by the District and its users. All sewer plans, specifications and methods of work within the District shall be submitted to the City in writing and approved by the City prior to any construction or tap in the District’s designated area. No permit shall be final and no service shall be provided to property until construction is approved, in writing by the City.

4. The District shall be responsible for the proper maintenance of its sewer system and shall rectify any problems or conditions which have been determined by the District or the City to be detrimental to the City’s treatment process or system. Should the City determine that any discharge enters the sewer system contrary to applicable laws, ordinances, statutes, rules, regulations or permits, the District agrees to proceed at once to take whatever lawful means may be necessary to rectify any such problem or condition.

5. The City shall have the right to allocate service under this Contract, and the City may deny additional service for any utility-related reason, but in no event will the City terminate or refuse any service without cause. The City shall have the right to disconnect service to any area annexed to the District when such annexation takes place without prior written City approval.

Within one year of this agreement, the District shall provide the City with an estimate of the number of equivalent service taps needed for the next five (5) years under current zoning and planned build out in the District’s area as shown on Exhibit A. The District shall continue to monitor zoning changes within its area to estimate its tap requirements and provide the City with notice of tap requirement for the next five (5) year period which time shall be given to the City on each anniversary date of this Agreement in a form satisfactory to the City.

6. The City may impose and collect reasonable fees, tolls and charges, which shall be uniform as to all outside-City users for the services provided by the City under this Connector’s Agreement.

The City shall bill the District users directly for all applicable City charges for services rendered under this Agreement. Should any user not pay the City, the City shall bill the District and the District shall pay the amount due to City within forty-five (45) days of such billing. These charges are subject to adjustment by the City from time to time. When such adjustment to these charges are made, the City shall give the District forty-five (45) days advance written notice.

The City may bill and collect “District Charges” imposed by the Districts as an additional item to be billed and collected by the City along with the City’s Treatment charge and other fees. The “District Charges” received by the City shall be remitted by the City to the District annually, less an amount equal to the City and District charges which remain delinquent. The District shall notify the City of any changes in the District charges to be imposed and the remittance schedule before May 1st of each year.
7. Subject to the terms of the Taxpayer’s Bill of Rights (TABOR), the term of this Agreement is for a period of three (3) years from the date of execution and automatically renewed for six (6) subsequent three (3) year periods unless either party gives a minimum of six (6) months written notice, during which time the District agrees that all effluent produced from taps within the District shall not be in violation of any federal, state or City laws, rules or regulations, or any other applicable governmental regulations or the permits under which the City operates its sewage treatment system. The City agrees, during the term hereof, to treat said effluent and to maintain adequate facilities for treating the same.

8. The District agrees that it will maintain, at its own expense, all lines now owned and operated by the District, it being specifically agreed that the City assumes no responsibility should any of the District’s lines become clogged, damaged, or require maintenance. The District shall, if it deems necessary, notify its users of the District’s procedure to remedy service disruption.

9. The City is providing only sewage treatment service and, pursuant thereto; any permits incidental to the use of the City’s sewage lines shall be governed only by this individual Contract with the District and the City does not, by this Contract, offer treatment service except in strict accordance with the terms hereof. This Contract does not offer, and shall not be construed as offering, sewage treatment service to the public generally or to any area outside the limits of the District’s service area described in Exhibit A.

10. This Contract may not be assigned, sold or transferred by the District without the City’s written consent.

11. Should any federal law, rule, permit or regulation or should a decree or order of a court render void or unenforceable any provision of this Contract, in whole or in part, the remainder shall remain in full force and effect.

12. The District shall enforce this Agreement and each of its terms and conditions within the area described in “Exhibit A.” The District shall refuse to serve a user or potential user; disconnect the service of any user pursuant to appropriate law; or take other appropriate action in the event of:

   a. Nonpayment of such user of any charge made by the City for services;
   b. Any violation or noncompliance by such user with the terms of this Agreement;
   c. Any violation or noncompliance by such user with the applicable laws, rules, permits or regulations of the City, the United States government, including the EPA, the State of Colorado, the Department of Health, or other law, rule, permit or applicable regulation.

13. Continued breach of this Agreement by the District and/or its users shall be considered cause for the City to terminate this Agreement. Should the District fail to promptly rectify a breach of any provisions identified herein, after notice thereof, the City may take such steps and do such work as it deems necessary to enforce this Agreement, including litigation and specifically a right to injunction or specific performance against the District or any of its users as is necessary to protect the City’s system and operations.
The prevailing party shall be entitled to expenses and costs of suit, including attorney fees.

14. Should more than one district be connected to a sewer line, all districts on the sewer line who are in breach of this Agreement shall be jointly and severally liable for any such breach of this Agreement and each such district shall immediately, after notice, rectify any problem or condition detrimental to the treatment process arising within its legal boundaries. When more than one district is connected to a sewer line, and the City discovers any violation of the terms of this connector’s agreement; the City shall not be required to prove which district is at fault but shall make available to all such affected districts all information developed or accumulated by the City pertaining to such breach. Nothing contained herein shall preclude a claim for indemnity or contribution by any District against another District connected to a common sewer line. CRS-13-21-111.5, as amended shall govern the percentage of liability of any district on a common sewer line in the event the City seeks to impose liability based upon negligence or fault.

15. This Contract shall not be used as a legal defense or prohibition to the mandatory consolidation of facilities by either party as may be required by the laws of the State of Colorado of all existing sewer collection systems and facilities to a governmental entity created to assume responsibility for sewer service in the area in which both the City and State are a part under statutory or constitutional authority.

CITY OF ENGLEWOOD, COLORADO

, Mayor

ATTEST:

, City Clerk
COLUMBINE VALLEY WATER AND SANITATION DISTRICT

LEE SCHILLER, President

STATE OF COLORADO )
COUNTY OF Jefferson ) ss.

The foregoing instrument was acknowledged before me this 7th day of June, 2013, by ________________________________.

Witness my hand and official seal.

My Commission expires: 9/20/2015

NOTARY PUBLIC

[Stamp]
EXHIBIT A
COLUMBINE WATER & SANITATION DISTRICT
BOUNDARY MAP
COUNCIL COMMUNICATION

<table>
<thead>
<tr>
<th>Date</th>
<th>Agenda Item</th>
<th>Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 3, 2013</td>
<td>9 a iii</td>
<td>Valley Supplement #22</td>
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</tbody>
</table>

INITIATED BY
Utilities Department

STAFF SOURCE
Stewart H. Fonda, Director of Utilities

COUNCIL GOAL AND PREVIOUS COUNCIL ACTION

None.

RECOMMENDED ACTION

The Water and Sewer Board, at their July 9, 2013 meeting, recommended Council approval of a Bill for an Ordinance approving Valley Supplement #22.

BACKGROUND, ANALYSIS, AND ALTERNATIVES IDENTIFIED

The City of Englewood provides sewage treatment to a population of about 70,000 people outside the City through contracts with numerous connector districts. The area is defined by the natural drainage and extends south and east from Broadway to the Valley Highway and from Hampden to Lincoln Ave. excluding Highlands Ranch. By contract the City of Englewood must approve any additions of land to be served by the districts. These are usually in-fill situations that are within what the City considers to be the area it has committed to serve. Adequate capacity has been provided in the treatment plant to accommodate all such future inclusions.

A request was made by the Valley Sanitation District representing the owner/developer, MLATL Family LLLP for inclusion into the Valley Sanitation District. Supplement #22 is for an area approximately 3.53 acres. The zoning per Arapahoe County is I-2, General Commercial/Industrial. The proposed use of the property is for an office/warehouse with vehicle storage. MLATL is connected to Ralph Schomp Automotive.

The legal is attached as Exhibit A. The property is located near W. Princeton Pl. and S. Federal Blvd., with a proposed address of 4300 S. Federal Blvd.

FINANCIAL IMPACT

None.

LIST OF ATTACHMENTS

Minutes from July 9, 2013 Water and Sewer Board minutes
Proposed Bill for an Ordinance
WATER & SEWER BOARD
MINUTES
TUESDAY, JULY 9, 2013

Present: Oakley, Wiggins, Habenicht, Waggoner, Moore, Woodward, Burns, Olson, Lay
Penn
Absent: None.

Also present: Stu Fonda, - Director of Utilities, Yasser Abouaish – City Engineer and John Bock – Utilities Manager

The meeting was called to order at 5:04 p.m.

1. MINUTES OF THE JUNE 11, 2013 MEETING.

The Board approved the Minutes of the June 11, 2013 Water Board Meeting.

Motion: To approve the June 11, 2013 Water and Sewer Board Minutes.

Moved: Habenicht Seconded: Oakley

Motion approved unanimously.

2. BIG DRY CREEK DRAINAGEWAY STUDY.

Mr. Dave Henderson, of the Public Works Department, appeared before the Board to review a request for $12,000 for Englewood’s portion of the Big Dry Creek Drainageway Study Master Plan initiated by the Southeast Metro Stormwater Authority.

The study is for identifying storm flows for future improvements, areas needing stabilization, floodplain management for future development and new mapping of flood hazard areas. Staff is requesting $12,000 be appropriated from the Stormwater Utility Fund.
Motion: To approve funding Englewood’s share of the Big Dry Creek Drainageway Study from the Stormwater Fund in the amount of $12,000.

Moved: Penn Seconded: Moore

Motion approved unanimously.

3. ENGLEWOOD 2013 WATER CONSERVATION PLAN.

Mr. Abouaish reviewed the final draft of the 2013 Water Conservation Plan. The Board evaluated comments received during the 90-day review period. The recommendations submitted will not change the existing drafted water conservation plan, but will be included in the appendix and considered for implementation over the next five years. Englewood’s responses to the comments received will be included in the appendix. It was recommended that the responses be published in a future issue of the Pipeline.

Motion: To recommend Council approval of the 2013 Englewood Water Conservation Plan.

Motion: Burns Seconded: Wiggins

Motion approved unanimously.

4. COLUMBINE WATER AND SANITATION DISTRICT CONNECTOR’S AGREEMENT.

Sanitary sewer service is provided to districts outside of the Englewood corporate boundaries through the standard connector’s agreement. Columbine Water and Sanitation District will continue to own the lines and will be responsible for capital improvements in its system. The City Attorney’s office has reviewed and approved the standard Connector’s Agreement.

Motion: To recommend Council approval of the Columbine Water and Sanitation District Connector’s Agreement.

Motion: Burns Seconded: Lay

Motion approved unanimously.
5. VALLEY SUPPLEMENT #22.

A request was made by the Valley Sanitation District representing the owner/developer, MLATL Family LLLP for inclusion into the Valley Sanitation District. Supplement #22 is for an area approximately 3.53 acres. The zoning per Arapahoe County is I-2, General Commercial/Industrial. The proposed use of the property is for an office/warehouse with vehicle storage. MLATL is connected to Ralph Schomp Automotive. The property is located near W. Princeton Pl. and S. Federal Blvd. with an address of 4300 S. Federal Blvd.

Motion: To recommend Council approval of Valley Supplement #22.

Moved: Waggoner Seconded: Lay

Motion approved unanimously.

6. 4344 S. WASHINGTON – ILLEGAL WATER TURN-ON.

The Board discussed a water and sewer account at 4344 S. Washington. The owner has been repeatedly turned off for non-payment and has been turning the water back on themselves. City Code does provide authority to dig up in the street and disconnect at the corporation stop. The Board recommended that staff check the Utilities Department legal position and options with the City Attorney. Ms. Olson directed staff to go out to the property with the Englewood Impact Team to determine reason for non-payment. Options to digging up the street to disconnect were discussed. The Board will be updated at a future meeting.

Jim Woodward left at 5:40 p.m.

7. EASEMENT VACATION – 5001 S. BROADWAY.

The new property owner, Broadbell LLC, is requesting Englewood’s vacation of abandoned easements on the west side of their property at 5001 S. Broadway. The easements were deemed not necessary by the Utilities Engineer to service the existing improvements on the property. The termination of this easement will facilitate development of the property.

Motion: To recommend Council approval of the vacation of the abandoned utilities easements at 5001 S. Broadway for Broadbell LLC.

Moved: Waggoner Seconded: Oakley

Motion passed unanimously.
8. MS4 PERMIT WITH ARAPAHOE SCHOOL DISTRICT 1.

The Board received a copy of the memo to Gary Sears dated June 19, 2013 regarding notifying the Arapahoe School District #1 of the one year notice to apply for its own MS4 Stormwater Permit. A meeting with The Director of Utilities, the City Manager and the Arapahoe School District #1 is set up for August 15.

9. SUPREME COURT RULING — LAWN IRRIGATION RETURN FLOWS.

The Colorado Supreme Court ruled against Englewood in the lawn irrigation return flows issue. Stu Fonda discussed how the ruling affects Englewood's water rights.

Adjourned 6:00 p.m.

The next Englewood Water Board meeting will be Tuesday, August 13, 2013 at 5:00 p.m. in the Community Development Conference Room.

Respectfully submitted,

Cathy Burrage
Recording Secretary

Please note: If you have a disability and need auxiliary aids or services, please notify the City of Englewood (303-762-2636) at least 48 hours in advance of when services are needed.
BY AUTHORITY

ORDINANCE NO. ___ SERIES OF 2013
COUNCIL BILL NO. 46
INTRODUCED BY COUNCIL MEMBER ______________

A BILL FOR

AN ORDINANCE APPROVING SUPPLEMENT NO. 22 TO THE VALLEY SANITATION DISTRICT CONNECTOR’S AGREEMENT WITH THE CITY OF ENGLEWOOD TO INCLUDE ADDITIONAL LAND WITHIN THE DISTRICT BOUNDARIES.

WHEREAS, Valley Sanitation District has submitted a request for inclusion into Valley Sanitation District of a parcel with the proposed use of the property as an office and warehouse; and

WHEREAS, Supplement No. 22 is for approximately 3.53 acres which is presently zoned I-2 (General Commercial/Industrial) and said zoning will remain the same; and

WHEREAS, said annexation of this additional parcel of land will not increase the tap allocation to the Valley Sanitation District; and

WHEREAS, it is necessary for said District to amend its contract with the City of Englewood to include this additional land within the District; and

WHEREAS, the Englewood Water and Sewer Board reviewed and recommended approval of the Valley Sanitation Supplement No. 22 to Connector’s Agreement at their July 9, 2013 meeting;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ENGLEWOOD, COLORADO, THAT:

Section 1. The Agreement between the City of Englewood and Valley Sanitation District entitled "Supplement No. 22 to Connector's Agreement" is hereby approved. A copy of said Agreement is attached hereto as Exhibit A.

Section 2. The Mayor and City Clerk are hereby authorized to sign and attest, respectively, the said Agreement for and on behalf of the City Council and the City of Englewood.

Introduced, read in full, and passed on first reading on the 3rd day of September, 2013.

Published by Title as a Bill for an Ordinance in the City's official newspaper on the 6th day of September, 2013.
Published as a Bill for an Ordinance on the City’s official website beginning on the 4th day of September, 2013 for thirty (30) days.

ATTEST:

Randy P. Penn, Mayor

Loucrishia A. Ellis, City Clerk

I, Loucrishia A. Ellis, City Clerk of the City of Englewood, Colorado, hereby certify that the above and foregoing is a true copy of a Bill for an Ordinance, introduced, read in full, and passed on first reading on the 3rd day of September, 2013.

Loucrishia A. Ellis
SUPPLEMENT NO. 22 TO CONNECTOR'S AGREEMENT

THIS AGREEMENT, made and entered into by and between the CITY OF ENGLEWOOD, acting by an through its duly authorized Mayor and City Clerk, hereinafter called the "City," and VALLEY SANITATION DISTRICT, Arapahoe and Douglas Counties, Colorado, hereinafter called the "District,"

WITNESSETH:

WHEREAS, on the 18th day of April, 1955 the City and the District entered into an Agreement in which the city agreed to treat sewage originating from the District's sanitary sewer system within the area served by the District, which Agreement was renewed by Connector's Agreement dated January 12, 1989.

WHEREAS, said Connector's Agreement provides that the district may not enlarge its service area without the written consent of the City;

NOW, THEREFORE, in consideration of the mutual covenants and undertakings herein set forth, the parties agree as follows:

1. The City hereby consents to the inclusion of certain additional area located in Arapahoe County, Colorado, owned by * see below and more fully described on Exhibit A attached hereto and incorporated herein by reference, into Valley Sanitation District. The City agrees that said additional area may be served with the sewer facilities of the district, and that the City will treat the sewage discharged into the City's trunk line from said additional area, all in accordance with the Connector's Agreement dated April 18, 1955 and Amended January 12, 1989. Accordingly, Exhibit A referred to in Paragraph 1 of the Connector's Agreement dated April 18, 1955, Amended January 12, 1989, is hereby amended to include such additional area.

2. Each and every other provision of the said Connector's Agreement dated April 15, 1955 and Amended January 12, 1989, shall remain unchanged.

IN WITNESS WHEREOF, the parties have set their hands and seals this day of , 20.

* MLATL Family Limited Liability Limited Partnership
CITY OF ENGLEWOOD

BY

MAYOR

ATTEST:

CITY CLERK
(SEAL)

VALLEY SANITATION DISTRICT,
ARAPAHOE COUNTY, COLORADO

By: ____________________________

ATTEST:

SECRETARY
(SEAL)

Supplement for Connectors Agr.doc
DISTRIBUTION COURT, ARAPAHOE COUNTY, STATE OF COLORADO

Court Address: Arapahoe County Justice Center
7325 South Potomac Street
Centennial, CO 80112

Phone Number: 303-649-6355

IN THE MATTER OF THE VALLEY SANITATION DISTRICT, ARAPAHOE, COLORADO

Timothy J. Flynn, Esq.
Collins, Cockrel & Cole
390 Union Blvd., Suite 400
Denver, Colorado 80228-1556
Telephone: (303) 986-1551
Facsimile: (303) 986-1755
E-Mail: Atty. Reg #: 10484

ORDER OF INCLUSION OF REAL PROPERTY
("MLATL Property")

THIS MATTER CAME BEFORE THE COURT upon the Motion for Inclusion of Real Property filed by the Valley Sanitation District. Having considered the Motion and attachments filed therewith, the Court finds good cause for granting said Motion;

IT IS THEREFORE ORDERED AND DECREED:

That pursuant to § 32-1-401(1)(c)(I), C.R.S., as amended, the real property legally described below, together with all improvements thereon ("Property") is hereby included into the boundaries of the Valley Sanitation District, Arapahoe County, Colorado, to wit:

LEGAL DESCRIPTION

A TRACT OF LAND BEING THAT PART OF THE NORTHWEST ¼ OF THE NORTHEAST ¼ OF SECTION 8, TOWNSHIP 5 SOUTH, RANGE 68 WEST OF THE 6TH P.M., DESCRIBED AS FOLLOWS: BEGINNING AT THE NORTHWEST CORNER OF SAID NORTHWEST ¼ OF THE NORTHEAST ¼ OF SECTION 8; THENCE S 88'50" E A DISTANCE OF 625.80 FEET TO A POINT ON THE...
WESTERLY LINE OF A TRACT DESCRIBED IN BOOK 1126 AT PAGE 249; THENCE S 43 DEGREES 08' 15" W ALONG SAID WESTERLY LINE OF SAID TRACT DESCRIBED IN BOOK 1126 AT PAGE 249 A DISTANCE OF 71.78 FEET; THENCE S 18 DEGREES 16' 30" W ALONG THE WESTERLY LINE OF SAID TRACT DESCRIBED IN BOOK 1126 AT PAGE 249 A DISTANCE OF 258.02 FEET; THENCE N 88 DEGREES 50' W A DISTANCE OF 497.57 FEET TO A POINT ON THE NORTH-SOUTH CENTERLINE OF SAID SECTION 8; THENCE NORTHERLY ALONG SAID NORTH-SOUTH CENTERLINE OF SAID SECTION 8 A DISTANCE OF 300 FEET TO THE POINT OF BEGINNING; EXCEPT THE WEST 50 FEET THEREOF, AS DESCRIBED IN BOOK 1007 AT PAGE 316, COUNTY OF ARAPAHOE, STATE OF COLORADO.

Also known by street and number as 4300 S. Federal Boulevard, Sheridan, Colorado 80110.

DONE this ___ day of _________, 2012.

BY THE COURT:

______________________________
District Court Judge
MLATL SUBDIVISION FILING NO. 1

FINAL PLAT

LOCATED IN THE NORTHEAST QUARTER OF SECTION 8, TOWNSHIP 5 SOUTH,
RANGE 69 WEST OF THE SIXTH PRINCIPAL MERIDIAN.
CITY OF SHERIDAN, COUNTY OF ARAPAHOE
STATE OF COLORADO

Sheet 2 of 2

RESUBMISSION OF PLAT D' AND LOT
DR. BLOCK 4
ROSE GARDENS SUBDIVISION AMENDED
(WEST PART OF THE SUBDIVISION)

LOT 1
ISLAND 27, LESS 2 A

LEGEND

PROPERTY LINE
BOUNDARY MARK

NB ADJUSTED EASEMENT

4400 SOUTH FEDERAL—MLATL SUBDIVISION PLATS NO. 1
FS 2 of 2
BY AUTHORITY

ORDINANCE NO. 41
SERIES OF 2013
INTRODUCED BY COUNCIL
MEMBER GILLIT

AN ORDINANCE AUTHORIZING THE REDEMPTION AND SALE OF PROPERTY
ACQUIRED THROUGH THE HOUSING REHABILITATION PROGRAM LOCATED AT 3685
SOUTH FOX STREET IN THE CITY OF ENGLEWOOD, COLORADO.

WHEREAS, the City Council of the City of Englewood accepted assignment from the
Englewood Housing Authority of all rights, assets and liabilities associated with the Housing
Rehabilitation Loan Program by the passage of Ordinance No. 23, Series 1999; and

WHEREAS, Englewood City Council authorized amending Title, 4, Chapter 3, with the
addition of a new Section 13 entitled “Housing Rehabilitation Fund” by the passage of Ordinance
No. 26, Series 1999; and

WHEREAS, the Englewood Housing Rehabilitation Program was created in 1976 to preserve
the existing housing stock in Englewood and to address the problems of low-income families with
the financing of major household repairs; and

WHEREAS, the Rehab Program approves home improvement loans that are secured by deeds of
trust recorded on the property representing generally second or third mortgages; and

WHEREAS, the homeowner defaulted on her loans and the first mortgage holder initiated
foreclosure; and

WHEREAS, this property went to public sale on June 26, 2013; and

WHEREAS, the Englewood Rehab Loan Committee recommended filing the Intention to
Redeem Notice with the public Trustee’s Office; and

WHEREAS, the City redeemed the property on July 23, 2013 and on July 30, 2013 received a
Public Trustee’s Confirmation Deed issued to the City of Englewood Housing Rehabilitation Fund;
and

WHEREAS, the property will be sold to a private owner-occupied party who has secured his
own financing and any remaining funds will be returned to the Housing Rehabilitation Fund; and

WHEREAS, if an offer to purchase is received from any City employee, their family members,
or any business in which a City employee has a financial interest, the offer will be submitted to the
Englewood City Council for approval;
NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF
ENGLEWOOD, COLORADO, AS FOLLOWS:

Section 1. The City Council of the City of Englewood hereby authorizes the redemption, and
subsequent sale of a Housing Rehabilitation Property acquired through the foreclosure process
located at 3685 South Fox Street.

Section 2. The Mayor and the City Clerk are authorized to execute the proper form of deed for
the conveyance of the property located at 3685 South Fox Street, Englewood, Colorado pursuant to
Section 71 of the Englewood Home Rule Charter.

Introduced, read in full, and passed on first reading on the 19th day of August, 2013.

Published by Title as a Bill for an Ordinance in the City’s official newspaper on the 23rd day of
August, 2013.

Published as a Bill for an Ordinance on the City’s official website beginning on the 21st day of
August, 2013 for thirty (30) days.

Read by title and passed on final reading on the 3rd day of September, 2013.

Published by title in the City’s official newspaper as Ordinance No. __, Series of 2013, on
the 6th day of September, 2013.

Published by title on the City’s official website beginning on the 4th day of
September, 2013 for thirty (30) days.

__________________________________________
Randy P. Penn, Mayor

ATTEST:

Loucrishia A. Ellis, City Clerk

I, Loucrishia A. Ellis, City Clerk of the City of Englewood, Colorado, hereby certify that the
above and foregoing is a true copy of the Ordinance passed on final reading and published by
title as Ordinance No. __, Series of 2013.

______________________________
Loucrishia A. Ellis
## COUNCIL COMMUNICATION

<table>
<thead>
<tr>
<th>DATE: September 3, 2013</th>
<th>AGENDA ITEM:</th>
<th>SUBJECT: Ordinance Approving rezoning 4201 South Navajo Street from I-1 to Navajo Apartments Planned Unit Development (PUD)</th>
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<td>AGENDA ITEM:</td>
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<td>INITIATED BY:</td>
<td></td>
<td>STAFF SOURCE: Brook Bell, Planner II</td>
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<tr>
<td>Elsey Partners, LLC</td>
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<td>Elsey Partners, LLC</td>
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<tr>
<td>1532 College Avenue F19</td>
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<td>1532 College Avenue F19</td>
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<tr>
<td>Manhattan, Kansas 66502</td>
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### COUNCIL GOAL AND PREVIOUS COUNCIL ACTION

There has been no previous Council action concerning the proposed Navajo Apartments Planned Unit Development (PUD).

### PREVIOUS PLANNING COMMISSION ACTION

The Planning and Zoning Commission considered the proposed Navajo Apartments PUD at a Public Hearing conducted on May 14, 2013. The Commission considered testimony and voted 8-0 to forward the proposed Navajo Apartments PUD to City Council with a favorable recommendation for adoption with the following condition:

- That the final Navajo streetscape section may vary from the curb alignment, sidewalk width and location, and associated landscape zone shown on the PUD; and that the final streetscape section for the Navajo Apartments PUD will be approved by the City Manager or designee in conjunction with the building permit.

This condition has been included in the Ordinance approving the rezoning.

### RECOMMENDED ACTION

Staff recommends adoption of an ordinance approving the Navajo Apartments PUD and setting September 16, 2013 as the date for Public Hearing to consider public testimony on the PUD.

### BACKGROUND

The subject property of this PUD is located mid-block on the 4200 block of South Navajo Street between Oxford Avenue to the north and Quincy Avenue to the south. The property is approximately 800 feet south of RTD's Oxford Light Rail Station. Land to the south and east of the subject property is zoned I-1 Light Industrial District and contains industrial uses. Land to the north of the property was recently rezoned to the Oxford Station Transit Oriented Development PUD which will include 252 residential apartment units with
an option for mixed commercial uses. Land directly to the west of the subject property contains the BNSF railroad tracks and RTD Light Rail tracks and is not within the City of Englewood limits.

The subject property is owned by the developer’s father Bruce Elsey. The site was the former location of his cat litter manufacturing company which has since relocated to a larger facility in northwest Englewood. Currently, a manufacturer of outdoor bleachers is leasing the existing warehouse building and remainder of the property. The developer (Elsey Partners) believes that the site’s proximity to the Oxford Light Rail Station makes the property an excellent candidate for a residential apartment complex. The developer foresees young professionals working downtown and students attending Arapahoe Community College or the Auraria campus as potential tenants.

In the fall of 2012, the Elsey Partners came forward with a proposal to construct between 130 and 180 apartment units on the 2.09 acre property. Multi-unit dwellings are not permitted in the I-1 Light Industrial Zone District; therefore, the developer began the process of requesting a rezoning to a PUD to accommodate the residential use.

**PUD OVERVIEW**

A Planned Unit Development establishes specific zoning and site planning criteria to meet the needs of a specific development proposal that may not be accommodated within existing zoning development regulations. PUDs provide the opportunity for unified development control for multiple properties or multiple uses.

The proposed Navajo Apartments PUD would allow a maximum of 146 residential apartment units on the property, although the current building plan shows 141 units. The majority of the parking would be on the surface with a portion of the parking being tucked underneath the second story of the building (podium style). The building is set close to South Navajo Street so that most of the parking is on the sides and rear of the property. The Site Plan includes two interior courtyards, perimeter landscaping, and interior parking lot landscaping. All new and existing utilities within the property and abutting right-of-way would be placed underground.

**Architectural Character:** The proposed PUD contains architectural character standards that require building plane changes every 50 feet, a mix of pattern and color changes, a minimum 30 percent masonry requirement, and a requirement that building entries be clearly defined with architectural elements. It should be noted that the conceptual building footprint shown on the Site Plan and the proposed building elevations are subject to change; however, any changes would have to meet the Design Standards and Guidelines of the PUD.

**Permitted Uses:** The subject property lies within the I-1 Light Industrial Zone District. The existing I-1 Zone District allows various industrial and commercial uses; however, most residential uses are not permitted. The proposed PUD District Plan includes a table of allowed uses that lists the permitted residential, commercial, and industrial uses. Some of the less desirable uses in the commercial and industrial categories such as adult uses and auto oriented uses have been omitted from the table of allowed uses in the PUD. Some of the more intensive industrial uses have also been omitted from the table. It should be noted that all permitted industrial uses must cease once a Certificate of Occupancy for any residential or commercial use is issued for any portion of the property.

**Dimensional Standards:** The following table provides a comparison between the property’s existing I-1 zone classification and the proposed PUD.
### COMPARISON OF DIMENSIONAL REQUIREMENTS FOR PRINCIPAL STRUCTURES

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<th>Max Height (ft)</th>
<th>Minimum Setbacks (ft)</th>
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<tr>
<td><strong>Front</strong></td>
<td></td>
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<tr>
<td><strong>Each Side</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Rear</strong></td>
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### I-1 (Existing Zoning)

- **All Allowed Uses**
  - None
  - 2:1
  - None
  - None
  - None
  - None
  - Where a building abuts upon, adjoins, or is adjacent to a residential zone district, minimum setbacks of 10 ft on all sides are required, except as required in Section 16-6-7.K, "Screening Requirements."

### Navajo Apartments PUD (New Zoning)

- **Residential Uses**
  - 623 sq ft per unit or 70 units per acre
  - None
  - 85
  - None
  - 75
  - 5
  - 25
  - 25

- **Public/Institutional Uses**
  - None
  - None
  - None
  - None
  - 100
  - 0
  - 5

- **Commercial Uses**
  - None
  - None
  - None
  - None
  - 100
  - 0
  - 5

- **Industrial Uses**
  - (Uses sunset if any new residential or commercial development occurs.)
  - None
  - 2:1
  - None
  - None
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  - Where a building abuts upon, adjoins, or is adjacent to a residential zone district, minimum setbacks of 10 ft on all sides are required, except as required in Section 16-6-7.K, "Screening Requirements."

### Residential Density:
The proposed Navajo Apartments PUD would permit a maximum of 146 units on the 2.09 acre property; this represents a density of 70.0 dwelling units per acre. The PUD only calls for 141 units at this time. For comparison purposes, the recently rezoned Oxford Station Transit Oriented Development PUD directly north of this site will include 252 residential apartment units on the 3.50 acre property; this represents a density of 71.9 dwelling units per acre.
Setbacks: A setback is the minimum distance a structure must be located from a property line. The proposed PUD’s setbacks for residential uses are as follows:
Front - 5 feet
Side – 25 feet
Rear – 25 feet
Public/Institutional Uses and Commercial Uses will follow the setbacks outlined for the MU-B-1 Zone District. Industrial Uses will follow the setbacks outlined for the I-1 Zone District.

Building Height: The maximum building heights in the PUD are based on the average elevation of the finished grade at the corners of the building, to the highest point of the building or structure. The maximum allowed building height for residential uses is 75 feet, although the PUD drawings label the building height as being +/- 60 feet. The maximum allowed building height within the PUD for Public/Institutional Uses, Commercial Uses, and Industrial Uses is 100 feet. It should be noted that The Unified Development Code (UDC) has no maximum height limit in the standard I-1 Zone District.

Bulk Plane: The bulk plane that regulates building mass is a function of required setbacks and maximum building height for each type of use. Sheet A208 of the PUD drawings illustrate projected shadows for the proposed apartments during the winter and summer solstice as well as the fall equinox.

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The traffic impact study indicates that the Oxford Avenue and Santa Fe Drive intersection currently has an overall peak hour level of service (LOS) of D. The Oxford Avenue and Navajo Street intersection currently has an overall peak hour level of service (LOS) of B.

After the approved Oxford Station and the proposed Navajo Apartments PUD projects are constructed (2015), the traffic study shows an increase in overall traffic volume from the two projects; however, analysis of future traffic conditions shows that the additional traffic volume is not expected to create a discernible impact to traffic operations in the surrounding roadway system. For 2015, the traffic study indicates that the
Oxford Avenue and Santa Fe Drive intersection and the Oxford Avenue and Navajo Street intersection will continue to have overall peak hour levels of service of (LOS) of D and B respectively.

The study area roadways are currently constructed to their ultimate cross-section and the traffic study does not recommend any modifications at this time. The existing intersections are projected to operate at future levels of service comparable to existing conditions during peak traffic hours. The traffic impact study was reviewed by the Public Works Traffic Division and CDOT, and both reviewers concurred with its findings.

**Signage:** The proposed PUD will follow the signage regulations for the MU-B-1 Zone District outlined in 16-6-13 of the UDC as amended, except that the PUD would permit the maximum height a projecting sign to be 55 feet high rather than the UDC’s maximum height limit of 25 feet.

**Landscaping:** The UDC requires that a minimum of 8%-10% of a property be landscaped in the I-1 Zone District. Further, the UDC requires that a minimum of 20% of the property be landscaped for multi-unit dwellings in the MU-B-1 zone district. The Navajo Apartments PUD proposes a minimum of 15% of the property be landscaped. The UDC also requires that a minimum of 70% of the required landscape be “living” landscape. The Navajo Apartments PUD site plan proposes that 73% of the required 15% minimum landscape be “living”. The non-living areas include a synthetic turf dog run and the interior courtyard with a pool. The PUD requirements exceed the regulations of the UDC for multi-unit dwellings in the MU-B-1 Zone District in terms of tree and shrub quantities.

**Screening and Fencing:** The PUD proposes to screen the perimeter parking lots with a 5 to 6 foot wide buffer of shrub plantings and deciduous trees. On the north property line, the Oxford Station PUD will be constructing a 6 foot high privacy fence between their project and the proposed Navajo Apartments PUD. The property to the south of the Navajo Apartments PUD has an existing warehouse building constructed right on the shared property line such that fencing is not necessary.

**Drainage:** The proposed Drainage Plan and Preliminary Drainage Report were reviewed and approved by the City’s Public Works Department.

**Park Dedication:** The subdivision regulations of the UDC require the dedication of park land or payment of a fee in lieu of dedication for all residential developments. The UDC provides a method for determining the amount of land to be dedicated based on the number of units and the number of new residents that will be generated. Based on the proposed 141 multi-unit dwellings, the proposed Navajo Apartments PUD would require a park dedication of 2.72 acres of land or payment of a fee in lieu of land dedication.

On September 4, 2012 City Council adopted a fee to be paid in lieu of dedication amount of $20,000 per required acre. Credit towards the dedication requirements for recreational amenities provided on-site by the developer and waivers of all or a portion of the remaining fee-in-lieu may be requested. Requests are considered on a case-by-case basis at the discretion of Council. Council will be considering the final fee-in-lieu of dedication amount concurrently or shortly after approval of the PUD.

**PLANNED UNIT DEVELOPMENT CONSIDERATIONS**

The UDC requires that Council shall only approve a proposed PUD if it finds that the proposed development complies with all applicable use, development, and design standards that are not otherwise modified or waived according to the rezoning approval; and the proposed rezoning meets one of the following criteria:
a. That the proposed development will exceed the development quality standards, levels of public amenities, or levels of design innovation otherwise applicable under this Title, and would not be possible or practicable under a standard zone district with conditional uses or with a reasonable number of Zoning Variances or Administrative Adjustments; or

The proposed PUD will exceed the development quality standards required by the UDC for industrial development as follows:

- The existing I-1 Zone District allows more intensive land uses than the proposed Navajo Apartments PUD. The existing I-1 Zone District has less restrictive setbacks, height limitations, and landscaping requirements than the proposed PUD.
- The UDC has no requirements for buildings in an existing I-1 Zone District as far as: building articulation, variety of materials, building transparency, or architectural character. The PUD proposes a greater level of building articulation including: a 3 foot minimum building plane change every 50 feet, a mix of pattern and color changes, a minimum 30 percent masonry requirement, and clearly defined building entries.

b. That the property cannot be developed, or that no reasonable economic use of the property can be achieved, under the existing zoning, even through the use of conditional uses or a reasonable number of Zoning Variances or Administrative Adjustments.

In addition to the two Planned Unit Development considerations above, the UDC requires that a property rezoned to PUD must not have a significant negative impact on those properties surrounding the rezoned area and that the general public health, safety and welfare of the community are protected. Staff has reviewed the PUD request and found the following:

- The PUD application is in conformance with the Comprehensive Plan and the Unified Development Code.
- The application is consistent with adopted and generally accepted standards of development in the City.
- The traffic impact study was reviewed by the Public Works Traffic Division and CDOT; both concurred with its findings.
- The rezoned property will not have a significant negative impact on those properties surrounding the rezoned area and the general public health, safety and welfare of the community are protected.

FINANCIAL IMPACT

The proposed Navajo Apartments PUD will generate a one-time building use tax of about $260,000 based on a construction cost of approximately $15 million. If Council concurs with the previously adopted park dedication fee, the project would also generate a one-time park dedication fee-in-lieu of approximately $54,000 based on 141 residential units.

The City of Englewood’s portion of property tax revenues are estimated at $4,000 per year. The amount of annual sales tax revenue to the City that could be generated by new residents living in the City is difficult to project given the nearby presence of the Riverpoint shopping center. There are also costs associated with providing services such as police and fire; though it is difficult to estimate what these projected costs will be.
LIST OF ATTACHMENTS

Planning Commission Staff Report including Exhibits A – J (May 14, 2013)
Planning Commission Minutes (May 14, 2013)
Planning Commission Findings of Fact
Proposed Bill for Ordinance
TO: Planning and Zoning Commission
THRU: Alan White, Community Development Director
FROM: Brook Bell, Planner II
DATE: May 14, 2013

SUBJECT: Case ZON2013-001 - Public Hearing
Navajo Apartments Planned Unit Development

APPLICANT:
Elsey Partners, LLC
1532 College Avenue F19
Manhattan, Kansas 66502

PROPERTY OWNER:
Bruce Elsey & 4201 South Navajo LLC
3998 South Broadway
Englewood, Colorado 80113

PROPERTY ADDRESS:
4201 South Navajo Street
PIN#s: 2077-04-11-026 and 2077-04-00-069

REQUEST:
The applicant has submitted an application to rezone the parcels above from I-1 Light Industrial District to the Navajo Apartments Planned Unit Development (PUD). The proposed PUD would allow a maximum of 146 residential apartment units on the property.

RECOMMENDATION:
Case ZON2013-001: The Department of Community Development recommends that the Planning and Zoning Commission review the Navajo Apartments PUD request and forward a favorable recommendation for approval to City Council with the following condition:

• That the final Navajo streetscape section may vary from the curb alignment, sidewalk width and location, and associated landscape zone shown on the PUD; and that the final streetscape section for the Navajo Apartments PUD will be approved by the City Manager or designee in conjunction with the building permit.
LEGAL DESCRIPTIONS:
PIN#: 2077-04-11-026 Plots 1 & 2 Except Road Goormans Industrial Subdivision.

PIN#: 2077-04-00-069 That part of the southeast 1/4 of section 4-5-68 described as beginning 5 ft. west of northeast corner of Lot 1 Goorman's Industrial Subdivision, thence west 347.25 ft. to a point on easterly right-of-way line of the Atchison Topeka and Santa Fe Railroad thence northeast 33.41 ft., thence east 340.63 ft., thence south 32.75 ft. to the beginning section 4-5-68

EXISTING ZONE DISTRICT:
I-1 Light Industrial District.

PROPERTY LOCATION AND SURROUNDING LAND USE:
The subject property of this PUD is located mid-block on the 4200 block of South Navajo Street between Oxford Avenue to the north and Quincy Avenue to the south. The property is approximately 800 feet south of RTD's Oxford Light Rail Station. Land to the south and east of the subject property is zoned I-1 Light Industrial District and contains industrial uses. Land to the north of the property was recently rezoned to the Oxford Station Transit Oriented Development PUD that will include 252 residential apartment units with an option for mixed commercial uses. Land directly to the west of the subject property contains the BNSF railroad tracks and RTD Light Rail tracks and is not within the City of Englewood limits.

PUD PROCEDURE:
Rezoning to a PUD requires the applicant to have a pre-application meeting with staff, and a neighborhood meeting with owners and tenants located within 1,000 feet of the proposed PUD. After the neighborhood meeting a formal application is made to the City and reviewed by City departments and other affected outside agencies. A public hearing is held before the Planning and Zoning Commission and City Council. If the PUD is approved there is a 30 day referendum time period before becoming effective.

BACKGROUND:
The Planned Unit Development is a rezoning process that establishes specific zoning and site planning criteria to meet the needs of a specific development proposal that may not be accommodated within existing zoning development regulations. A PUD rezoning provides the opportunity for unified development control for multiple properties or multiple uses.

The subject property is owned by the developer's father Bruce Elsey. The site was the former location of his cat litter manufacturing company that has since relocated to a larger facility in northwest Englewood. Currently, a manufacturer of outdoor bleachers is leasing the existing warehouse building and remainder of the property. The developer (Elsey Partners) believes that the site's proximity to the Oxford Light Rail Station makes the property an excellent candidate for a residential apartment complex. The developer foresees young professionals working downtown and students attending Arapahoe Community College or the Auraria campus as potential tenants.
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**NEIGHBORHOOD MEETING SUMMARY:**
Pursuant to the PUD procedure, the applicant conducted a neighborhood meeting on November 15, 2012, prior to submitting the application for a PUD rezoning on February 19, 2013. Notice of the pre-application meeting was mailed to property owners and occupants of property within 1000 feet of the site. Neighborhood meeting notes are attached to this report (See Exhibit B).

**CITY DEPARTMENT AND DIVISION REVIEW:**
The Navajo Apartments PUD and subsequent revisions were reviewed by the City’s Development Review Team (DRT) on March 5th, April 9th, and April 25th of 2013. Identified issues were addressed by the applicant and the final Navajo Apartments PUD was submitted on April 29, 2013.

**OUTSIDE AGENCY COMMENTS:**
Preliminary plans of the proposed Navajo Apartments PUD were referred to Tri-County Health, RTD, the Colorado Department of Transportation (CDOT), the City of Sheridan, Xcel Energy, Century Link, and Comcast. Each agency except for Comcast provided written comments that are attached as Exhibits C - H. There were no objections in the comments received provided that the applicant continues working with the agencies’ individual processes. If any other formal comments are received before the public hearing, Staff will present them during the hearing.

**PUD OVERVIEW:**
The proposed Navajo Apartments PUD would allow a maximum of 146 residential apartment units on the property, although the current building plan shows 141 units. The majority of the parking would be on the surface with a portion of the parking being tucked underneath the second story of the building (podium style). The building is set close to South Navajo Street so that most of the parking is on the sides and rear of the property. The Site Plan includes two interior courtyards, perimeter landscaping, and interior parking lot landscaping. All new and existing utilities within the property and abutting right-of-way would be placed underground.

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<tr>
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The study area roadways are currently constructed to their ultimate cross-section and the traffic study does not recommend any modifications at this time. The existing intersections are projected to operate at future levels of service comparable to existing conditions during peak traffic hours. The traffic impact study was reviewed by the Public Works Traffic Division and CDOT, and both reviewers concurred with its findings.

**Signage:** The proposed PUD will follow the signage regulations for the MU-B-1 Zone District outlined in 16-6-13 of the UDC as amended, except that the PUD would permit the maximum height a projecting sign to be 55 feet high rather than the UDC’s maximum height limit of 25 feet.

**Landscaping:** The UDC requires that a minimum of 8%-10% of a property be landscaped in the I-1 Zone District. Further, the UDC requires that a minimum of 20% of the property be landscaped for multi-unit dwellings in the MU-B-1 zone district. The Navajo Apartments PUD proposes a minimum of 15% of the property be landscaped. The UDC also requires that a minimum of 70% of the required landscape be “living” landscape. The Navajo Apartments PUD site plan proposes that 73% of the required 15% minimum landscape be “living”. The non-living areas include a synthetic turf dog run and the interior courtyard with a pool. The PUD requirements exceed the regulations of the UDC for multi-unit dwellings in the MU-B-1 Zone District in terms of tree and shrub quantities.

**Screening and Fencing:** The PUD proposes to screen the perimeter parking lots with a 5 to 6 foot wide buffer of shrub plantings and deciduous trees. On the north property line, the Oxford Station PUD will be constructing a 6 foot high privacy fence between their project and the proposed Navajo Apartments PUD. The property to the south of the Navajo Apartments PUD has an existing warehouse building constructed right on the shared property line such that fencing is not necessary.

**Drainage:** The proposed Drainage Plan and Preliminary Drainage Report were reviewed and approved by the City’s Public Works Department.
Park Dedication: The subdivision regulations of the UDC require the dedication of park land or payment of a fee in lieu of dedication for all residential developments. The UDC provides a method for determining the amount of land to be dedicated based on the number of units and the number of new residents that will be generated. Based on the proposed 141 multi-unit dwellings, the proposed Navajo Apartments PUD would require a park dedication of 2.72 acres of land or payment of a fee in lieu of land dedication.

On September 4, 2012 City Council adopted a fee to be paid in lieu of dedication amount of $20,000 per required acre. Credit towards the dedication requirements for recreational amenities provided on-site by the developer and waivers of all or a portion of the remaining fee-in-lieu may be requested. Requests are considered on a case-by-case basis at the discretion of Council. Council will be considering the final fee-in-lieu of dedication amount concurrently or shortly after approval of the PUD.

PUD SUMMARY:
The proposed Navajo Apartments PUD has been reviewed by the City’s Development Review Team (DRT) and the appropriate outside agencies. Issues identified by the DRT were addressed by the applicant and there were no objections from the outside agencies provided that the applicant continues working with the agencies’ individual processes. The PUD documents are complete and only one additional condition of approval is recommended at this time. Therefore, the Community Development Department recommends that the Planning and Zoning Commission review the Navajo Apartments PUD request and forward a favorable recommendation for approval to City Council.

PLANNED UNIT DEVELOPMENT CONSIDERATIONS:
The Planning and Zoning Commission is to review Navajo Apartments PUD request, and following the public hearing, may recommend that the Council approve, deny, or approve the rezoning with conditions. In its review of the application, the Commission’s recommendations should include findings on each of the following points:

1. The application is or is not in conformance with the Comprehensive Plan and this Title (UDC).

The Navajo Apartments PUD conforms to the Comprehensive Plan strategy of redevelopment. The Comprehensive Plan states, “Englewood residents will benefit from the new opportunities for housing, shopping, and entertainment these new developments will bring to the City”. The proposed PUD supports the following Comprehensive Plan Housing Goal #1: “Promote a balance mix of housing opportunities serving the needs of all current and future Englewood citizens.”

Additionally the PUD documents state: "This development fits with the goals of Transit Oriented Development in that it creates multi-family development near transportation hubs. The development will complement the Oxford Station project that was already approved and encourage more development of residential units replacing industrial warehouses.” A 45,000 square foot manufacturing/warehouse
building currently occupies this site. The project addresses the City’s 3-part strategy outlined in the 2003 Englewood Comprehensive Plan for Growth and Development in the City; Revitalization, Redevelopment and Reinvention.

The project will bring new life into the area and provide a unique housing option for residents near an existing light rail station. The project takes advantage of existing infrastructure and transportation options while reinvesting in an existing industrial and established residential neighborhood. The additional residents will take advantage of the existing amenities in the neighborhood and generate tax revenue that will benefit programs and services provided by the City of Englewood. The increased tax revenue will also benefit other taxing entities, most notably the School District.

2. The application is or is not consistent with adopted and generally accepted standards of development in the City.

The Navajo Apartments PUD is consistent with adopted and generally accepted development standards established by the City of Englewood. The application was reviewed by the City’s Development Review Team (DRT) and the appropriate outside agencies. All comments were addressed by the applicant.

3. The application is or is not substantially consistent with the goals, objectives, design guidelines, policies and any other ordinance, law, or requirement of the City.

The Navajo Apartments PUD is substantially consistent with the goals, objectives, design guidelines, policies, and other ordinances, laws and requirements of the City.

The UDC requires that the review or decision making body shall only approve a proposed PUD if it finds that the proposed development complies with all applicable use, development, and design standards set forth in the UDC that are not otherwise modified or waived according to the rezoning approval; and the proposed rezoning meets one of the following criteria:

a. That the proposed development will exceed the development quality standards, levels of public amenities, or levels of design innovation otherwise applicable under this Title, and would not be possible or practicable under a standard zone district with conditional uses or with a reasonable number of Zoning Variances or Administrative Adjustments; or

The proposed PUD will exceed the development quality standards required by the UDC for industrial development as follows:

• The existing I-1 Zone District allows more intensive land uses than the proposed Navajo Apartments PUD. The existing I-1 Zone District has less restrictive setbacks, height limitations, and landscaping requirements than the proposed PUD.
The UDC has no requirements for buildings in an existing I-1 Zone District as far as: building articulation, variety of materials, building transparency, or architectural character. The PUD proposes a greater level of building articulation including: a 3 foot minimum building plane change every 50 feet, a mix of pattern and color changes, a minimum 30 percent masonry requirement, and clearly defined building entries.

b. That the property cannot be developed, or that no reasonable economic use of the property can be achieved, under the existing zoning, even through the use of conditional uses or a reasonable number of Zoning Variances or Administrative Adjustments.

In addition to the two Planned Unit Development considerations above, the UDC requires that a property rezoned to PUD must not have a significant negative impact on those properties surrounding the rezoned area and that the general public health, safety and welfare of the community are protected. Staff has reviewed the PUD request and found the following:

- The PUD application is in conformance with the Comprehensive Plan and the Unified Development Code.
- The application is consistent with adopted and generally accepted standards of development in the City.
- The traffic impact study was reviewed by the Public Works Traffic Division and CDOT; both concurred with its findings.
- The rezoned property will not have a significant negative impact on those properties surrounding the rezoned area and the general public health, safety and welfare of the community are protected.

ATTACHMENTS:
Exhibit A: Navajo Apartments PUD
Exhibit B: Neighborhood Meeting Summary - November 15, 2012
Exhibit C: Tri-County Health Department - Letter dated March 11, 2013
Exhibit D: RTD - Letter dated March 4, 2013
Exhibit E: CDOT Region 6 – Letter dated February 28, 2013
Exhibit F: City of Sheridan – Letter dated March 8, 2013
Exhibit H: Century Link – Letter dated April 10, 2013
Exhibit I: Addendum to Traffic Impact Study - Dated April 2, 2013
Exhibit J: Traffic Impact Study and Appendix A
Navajo Apartments PUD
Neighborhood Meeting
4201 South Navajo Street
November 15, 2012

Attendees: Approximately 13 (see attached sign-in sheets)

Applicant Presentation

1. Bryan Elsey of Elsey Partners, LLC, stated that he grew up in Denver, and then went to Kansas State University with his brother Chris Elsey where they both studied landscape architecture. After graduating, he and his brother started three companies; Prime Design, Prime Built, and Prime Place. The companies design, build, and manage apartment buildings with a focus on student housing. To date they have constructed 450 apartment units in Manhattan, Kansas and 164 units in Stillwater, Oklahoma. Bryan Elsey then introduced his father Bruce Elsey who owns the subject property at 4201 S. Navajo St. and ran a cat litter manufacturing company named Precious Cat there prior to moving his operations to a larger facility in northwest Englewood.

2. Bryan Elsey described the proposed development which includes:
   • 186 market rate one and two bedroom apartment units.
   • A plan of 4 stories on top of a podium style parking design, resulting in 5 stories.
   • The 4th story includes some units with a loft that would add another story.
   • The plan includes two interior courtyards, one with a pool.
   • There are 209 parking stalls shown on the plan for the 186 apartment units.
   • The developer is still working through some storm water issues.

3. Public Comment
   The attendees asked questions and provided comments as follows. The applicant responded to the questions and provided the following answers (in italics):
   • Who did your market study? Have you looked at the Alexan project in Littleton or the Riverton project? A formal study has not been conducted at this time; however, it appears there have been several new multi-family projects constructed along the light rail corridor line.
   • The property just south of 4201 S. Navajo St. manufactures paint booths.
   • What are the unit sizes and price per square foot? We anticipate 750 to 800 square feet for a one bedroom. $900-$1000 monthly rent for a one bedroom, $1,200-$1,300 for a two bedroom.
   • Is the entire building podium style parking? Yes, so the building would be 5 to 6 stories or about 68 feet at its maximum height.
   • Where will you do your storm water detention? We will use underground detention?
   • Is there any landscaping around the outside of the property? There will be a perimeter landscape buffer and higher-quality landscaping along the street.
• There does not seem to be much landscaping, does it comply with City codes? We are doing a PUD to create a multi-unit residential development while providing a landscape that works with the proposed development.

• Has this project been through the City's Development Review Team? We have had a preliminary meeting with the City on our proposed concept.

• Which direction does the drainage go? Water runs west to the railroad right of way.

• What are your parking ratios? In our project in Manhattan Kansas we had .75 parking stalls per unit and the parking lot seems to be about 60% occupied at any given time.

• Will a parking ratio that low push parking onto the streets?

• What is your timing for construction? We're not sure yet, we are interested in seeing how the Oxford Station PUD project to the north of us does.

• Who is doing your civil engineering? Roth Engineering

4. City staff outlined the PUD process and next steps. The PUD frequently asked questions were provided.

5. Bryan Elsey of Elsey Partners, LLC made some closing remarks and the meeting was adjourned.
Please Sign In

Planned Unit Development
Pre-Application Neighborhood Meeting
November 15, 2012

Site: 4201 Navajo Street

Please Print

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<td>1000 Englewood Parkway</td>
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<tr>
<td>HWWABSTT</td>
<td>Mol W STANFORD AVE</td>
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<td>Jonathan BWSZ</td>
<td>5711 S. NEVADA</td>
<td>LITTLETON</td>
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<td>Steve Kurtz</td>
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<td>L. Woodruff</td>
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<td>Tim Schlichting</td>
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<tr>
<td>Rick Gulick</td>
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<td>Valarie Graves</td>
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<tr>
<td>John Gerlick</td>
<td>1166 W Princeton Pl</td>
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<td>80110</td>
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<tr>
<td>Angela Gerlick</td>
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</table>
March 11, 2013

Brook Bell  
City of Englewood  
Community Development Department  
1000 Englewood Parkway  
Englewood, Colorado 80110

RE: Navajo Apartments PUD  
TCHD Case No. 2856

Dear Mr. Bell:

Thank you for the opportunity to review and comment on the proposed Planned Unit Development (PUD) application for the site located at 4201 South Navajo Street to allow for 141 residential apartments close to the Oxford Station. Tri-County Health Department (TCHD) staff has reviewed the application for compliance with applicable environmental health regulations and potential recommendations for site improvements to encourage opportunities for healthy community design.

**Healthy Community Design and Connectivity**

Because chronic diseases related to physical inactivity and obesity now rank among the country's greatest public health risks, TCHD encourages community designs that make it easy for people to include regular physical activity, such as walking and bicycling, in their daily routines. At the project site level, TCHD encourages applicants to incorporate a well-connected system of pathways for pedestrians and bicyclists that support the use of a broader pedestrian and bicycle network off of the site. The following comments relate to the information contained in the PUD regulations.

**Land Uses**

TCHD recognizes that the current proposal is for 141 residential units. However, the PUD does not appear to list any allowable land uses. TCHD encourages the applicant to consider how the project might accommodate a future request for a small scale neighborhood use like a community garden. Community gardens are an excellent way in an urban environment to provide access for residents to healthy foods.

**Setbacks and Building Orientation**

The design and orientation of buildings can increase residents' use of sidewalks along streets improving the safety on the street by bringing more people to observe activities. TCHD commends the applicant for the allowance for a zero setback for a portion of the building and the requirement that 50% of the building be located at a 5 to 15-foot setback. TCHD encourages the applicant to use design standards to articulate how the building façade along the street should incorporate pedestrian-scale design features. Please see more comments about design standards in the next section of this letter.
Design Standards
The proposed language under “Design Standards and Guides” does not translate into specific requirements that will be easily enforceable when a proposed site plan on this site is evaluated. TCHD suggests adding more specific requirements to help articulate the intent of this section.

Pedestrian and Bicycle Circulation
TCHD encourages the applicant to include more specific requirements to ensure an on-site system of good connectivity for the proposed and any future development. The proposed language under “Pedestrian and Bicycle Access and Connectivity” does not translate into specific requirements that will be easily enforceable when a proposed site plan on this site is evaluated. In order to ensure that requirements stated in the PUD foster a walkable design that incorporates direct connections between on-site amenities and the broader circulation network, TCHD recommends adding greater specificity for location, minimum width and design criteria of on-site sidewalks.

Parking Standards
TCHD commends the applicant for allowing for a 25% parking reduction if within ¼ mile from a transit station. This type of standard is becoming more common in TOD standards in the Denver Metro region and helps support greater use of transit among residents of the development.

Bicycle Amenities
As mentioned earlier in this letter, TCHD supports community design that makes it easy for residents to walk or use their bicycles. TCHD commends the applicant for including bicycle parking standards in the PUD. The site plan does not seem to show bicycle facilities on the exterior of the building. While bicycle storage for residents could be accommodated internal to the building, it is important to include bicycle parking facilities that are easily accessible to visitors.

Flammable Gas
The subject property is located approximately 800 feet southeast of the former Arapco Landfill. Flammable gas from landfill may pose a health and safety hazard to the development. Section 1606-2 of the City of Englewood Unified Development Code requires flammable gas testing and approval for development located within one thousand feet of a former landfill.

Based on that requirement, TCHD recommends that the applicant work with a qualified environmental consultant to prepare a flammable gas investigation plan for the site, to be reviewed and approved by TCHD. Upon completion of the investigation, TCHD will review the results and determine if it will be necessary to incorporate a flammable gas control system(s) into the project. In addition, TCHD will determine whether construction safety practices are necessary during construction on the site.

Sun Safety for Outdoor Common and Gathering Areas
Skin cancer is the most common cancer in the United States. Colorado has the 5th highest death rate from melanoma, the most deadly form of skin cancer. A leading risk factor for skin cancer is exposure to ultraviolet rays (UV) from the sun. Seeking shade
when outside is one of the best ways to prevent overexposure to UV rays. TCHD recommends the use of shade in common areas like courtyards, patios and play areas through the planting of trees or physical shade structures. It is important that shade structures or appropriate landscaping is considered early in the design process so that it is incorporated well into the overall site plan and optimizes the opportunity for residents and visitors to shield themselves from the sun and reduce their risk of skin cancer.

Please feel free to contact me at (720) 200-1571 or you have any questions on TCHD's comments.

Sincerely,

Sheila Lynch
Land Use Program Coordinator
Tri-County Health Department

CC: Warren Brown, Hope Dalton, Vanessa Richardson, Laura DeGolier, TCHD
March 4, 2012

Brook Bell, Planner II
City of Englewood
Community Development Department
1000 Englewood Parkway
Englewood, CO 80110

Re: Case No.: ZON2013-001, Navajo Apartments

Dear Mr. Bell

Thank you for providing RTD with the opportunity to comment on the above referenced case. RTD strongly supports this type of higher-density development in the areas adjacent to light rail stations. Our one suggestion is as follows: it appears from the plans that the sidewalk along South Navajo Street is an attached sidewalk. So as to enhance the pedestrian environment along South Navajo to the Oxford Light Rail Station, RTD would recommend requiring a detached sidewalk, if possible.

Thank you again for the opportunity to comment on this case. Should you need additional information, I can be reached at (303) 299-2439.

Sincerely,

Chris Quinn
Project Manager

February 28, 2013

City of Englewood
Attn: Brook Bell
Community development department
1000 Englewood Parkway
Englewood, Colorado 80110

Dear Mrs. Bell:

RE: ZON2013-001 NAVAJO APARTMENTS 4201 SOUTH NAVAJO STREET AND SH (85) CITY OF ENGLEWOOD

Thank you for referring the proposal for our review. It does not appear that any work is to be performed in CDOT right of way. If the proposal should change to obtain permission to construct utilities within state highway right-of-way, a Utility/Special Use Permit is required. Please visit our website at http://www.dot.state.co.us/UtilityProgram/Process.cfm, or obtain the application through this office.

If you have any questions, please contact me at 303-512-4271.

Sincerely,
Bradley T. Sheehan, P.E.
Access Engineer
March 8, 2013

Brook Bell
City of Englewood
1000 Englewood Parkway
Englewood, CO 80110

Re: 4201 S. Navajo Street
Englewood, CO
Planned Unit Development Amendment Referral

Dear Brook:

The City of Sheridan is in receipt of the Planned Unit Development Amendment Referral for the Navajo Apartments project located at 4201 South Navajo Street, case number ZON2013-001. We have reviewed the proposal and have the following comments:

1. Is this proposal modifying an existing PUD? The cover sheet referenced a PUD amendment. If there is an existing PUD it should be clearly referenced and its reception number referenced.

2. Since the survey (S101) shows this project on two lots, will a subdivision action be required to eliminate the lot line running through the middle of the project? Also, is the sanitary easement owner ok with having trees located in the parking lot islands within close proximity to the existing sanitary sewer line?

3. Sheet A102
   a. Shows two names for the project, Navajo Apartments on the top of the page, and 4201 S Navajo under the intent.
   b. Under the intent statement it indicates the PUD mostly complies with the Comp Plan and Code. It would be nice to know how it doesn’t comply as part of this application.
   c. The intent portion identifies the “Oxford Transit Oriented Development.” Is that a plan, a study or part of the recent Light Rail Corridor Plan?
   d. Under the “Relationship to the Unified Code” portion of the page, the applicants have expressed an interest in not having the PUD ever lapse. Is this permitted from a vested property rights standpoint?
   e. The dimensional requirements show a 10’ setback to the south as the requirement, but the site plan shows parking to within 4.72’ of the south property line.
   f. The sizes of the parking spaces are shown at 8’6”. The site plan dimensions them at 8.5’. Should be consistent. At any rate, a space less than 9’ is too narrow. Suggest increasing the parking space sizes. This will impact either the number of spaces or the size of the parking lot islands.

www.ci.sheridan.co.us
g. We suggest more bike racks be provided given the location and nature of this development.

h. Under “Landscaping and Screening” ratios of trees and shrubs are provided per RLA. Please define what RLA is.

i. The “Design Standards and Guides” only states they will have high quality articulated designs. More detail is needed to understand their design intent.

4. Consistent page numbering on the plans would be helpful.

5. Sheet C101
   a. Will the existing chain link fence remain on the north property line? Given the outdoor storage in that area, it makes sense for the applicants to provide more of a visual screen.
   b. Site triangles should be shown at the vehicular entrances to the site.
   c. Are the two small sidewalks shown sufficient to get pedestrians from this site to Navajo?
   d. The “drinking straw” looking element immediately west of the site needs to be identified.
   e. Legend should include number of parking spaces.

6. What is the 50’ easement on the west portion of the site for?

7. Will one trash enclosure be sufficient for the number of apartments at this site?

Thank you for the opportunity to review this plan. Should any questions arise, please either call me at 303-438-3307 or via email at

Sincerely,
March 11, 2013

City of Englewood Community Development
1000 Englewood Parkway
Englewood, Colorado 80110

Attn: Brook Bell

Re: Navajo Apartments PUD, Case # ZON2013-001

Public Service Company of Colorado (PSCo) has reviewed the plans for Navajo Apartments PUD. Please be aware PSCo owns and operates existing electric distribution facilities within the proposed project area. Public Service Company has no objection to this proposed rezone, contingent upon Public Service Company of Colorado’s ability to maintain all existing rights and this amendment should not hinder our ability for future expansion, including all present and any future accommodations for natural gas and electric transmission related facilities.

Please be aware that depending on how the transformer cabinet will open the landscaping plans may need to be adjusted to accommodate clearance requirements.

The property owner/developer/contractor must contact the Builder’s Call Line at 1-800-628-2121 and complete the application process for any new gas or electric service, or modification to existing facilities including relocation and/or removal and associated costs. It is then the responsibility of the developer to contact the Designer assigned to the project for approval of design details. Additional easements will need to be acquired by separate document for new facilities.

As a safety precaution, PSCo would like to remind the developer to call the Utility Notification Center at 1-800-922-1987 to have all utilities located prior to any construction.

If you have any questions about this referral response, please contact me at (303) 571-3306.

Sincerely,

Donna George
Contract Right of Way Referral Processor
Public Service Company of Colorado
April 10, 2013

City of Englewood
Community Development Department
Mr. Brook Bell
1000 Englewood Parkway
Englewood, CO 80110

RE: Case No.: ZON2013-001
4201 S. Navajo St., Englewood, Colorado
Navajo Apartments

Dear Mr. Bell,

Qwest Corporation d/b/a CenturyLink QC has reviewed the materials provided by this proposal. CenturyLink has no objection to the Case.

However, please note that CenturyLink owns, operates and maintains telecommunication cables and terminals at the structure addressed above. The costs of certain modification to or relocation of said facilities may be billable to the Requestor.

The Requestor should contact CenturyLink Field Engineer Tim Styron at [___] to arrange for the safe and proper removal of any existing CenturyLink facilities and to discuss planning for new facilities (including fiber) to serve this apartment development.

Thank you for the opportunity to review the referenced Case.

Sincerely,

Charles Place
Right of Way Manager
CenturyLink
7759 S. Wheeling Ct.
Englewood, CO 80112

720.578.5132
charles.place@centurylink.com
April 2, 2013

Mr. Ladd Vostry
Traffic Engineer
City of Englewood
1000 Englewood Pkwy
Englewood, CO 80110

RE: Traffic Impact Study – Compliance Letter
Navajo Apartments

Dear Mr. Vostry,

SM ROCHA, LLC prepared the February 2013 traffic impact study (TIS) for Navajo Apartments and the March 20, 2013 supplemental traffic signal operations information for Oxford Avenue and Navajo Street intersection. The basis for prepared information was Navajo Apartments proposing to construct approximately 130 residential dwelling units.

It is understood that the total number of dwelling units proposed for construction has increased to 141. Proposed site access to Navajo Street remains unchanged from that presented in the February 2013 TIS.

Similar to the February 2013 TIS, standard traffic generation characteristics compiled by the Institute of Transportation Engineers (ITE) in their report entitled Trip Generation, 8th Edition, were applied to the additional dwelling units in order to estimate the increase in average daily traffic (ADT), AM Peak Hour, and PM Peak Hour vehicle trips for site development. A vehicle trip is defined as a one-way vehicle movement from a point of origin to a point of destination.

Trip generation rates used for comparison are presented in Table 1.

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Key: DU = Dwelling Units
Table 2 illustrates projected average daily traffic (ADT), AM Peak Hour, and PM Peak Hour traffic volumes likely generated by the additional eleven (11) dwelling units.

<table>
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<td>Total:</td>
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Table 2 summarizes that the additional dwelling units will generate an increase of approximately 59 daily trips with 4 of those occurring during the AM Peak Hour and 5 during the PM Peak Hour. Moreover, the difference between peak hour trip generation of 130 and 141 dwelling units results in an increase in traffic generation of approximately eight percent. This minor increase in site traffic generation is not substantial enough to create a negative impact to traffic operations of the existing surrounding roadway system or change intersection operational results presented in the February 2013 TIS.

It is our professional conclusion that the proposed 141 dwelling units are in compliance with the Navajo Apartments TIS dated February 2013, and all recommendations presented in that study, including supplemental information, remain valid.

We trust that our findings will assist in approval of the proposed Navajo Apartments development. Please contact us should further assistance be needed.

Sincerely,

SM ROCHA, LLC
Traffic and Transportation Consultants

Mike Rocha, TSOS, TOPS
Principal

Fred Lantz, PE
Traffic Engineer
TRAFFIC IMPACT STUDY

For

Navajo Apartments
Englewood, Colorado

February 2013

Prepared for:

Roth Engineering Group
7853 East Arapahoe Court, Suite 2500
Centennial, Colorado 80112

Prepared by:

SM ROCHA, LLC
TRAFFIC AND TRANSPORTATION CONSULTANTS

12303 Airport Way, Suite 200
Broomfield, Colorado 80021
(303) 327-1490

Project Manager/Engineer:
Mike Rocha, TSOS, TOPS

Engineer in Responsible Charge:
Fred Lantz, PE

Ref: 12-09210ls
I. Introduction

Project Overview

This traffic impact study addresses the capacity, geometric, and control requirements associated with Navajo Apartments. This proposed residential development is located on South Navajo Street between West Oxford Avenue and West Quincy Avenue in Englewood, Colorado.

Study Area Boundaries

Through coordination with City Staff, the study area to be examined in this analysis encompasses the Oxford Avenue intersections with Santa Fe Drive and Navajo Street.

Figure 1 illustrates location of the development site and study intersections.

Site Description

Land for the development accommodates a light industrial building and is surrounded by a mix of commercial, light industrial, retail, office and residential land uses. The proposed development is understood to entail the construction of approximately 130 multi-family residential units.

Primary access to the development is provided at the following locations: Two full-movement accesses onto Navajo Street.

For purposes of this study, it is assumed that development construction would not be phased and completed by end of Year 2015.

The conceptual site plan as prepared by Roth Engineering Group is shown on Figure 2.
Existing and Committed Surface Transportation Network

Within the study area, Santa Fe Drive, Oxford Avenue and Navajo Street are the primary roadways that accommodate traffic to and from the proposed development. A brief description of the roadways is provided below:

Santa Fe Drive (US85) is a north-south State Highway having six through lanes (three lanes in each direction) with exclusive turn lanes at intersections within study area. Santa Fe Drive also provides for High Occupancy Vehicles (HOV) lanes during morning and afternoon peak traffic hours. The posted speed on Santa Fe Drive is 55 MPH.

Oxford Avenue is a two lane, east-west roadway with a combination of exclusive or shared through and turn lane configurations. This roadway has a posted speed limit of 30 MPH.

Navajo Street is a roadway similar to Oxford Avenue. This north-south roadway provides local access to the proposed development and adjacent land uses. This roadway also has a posted speed limit of 30 MPH. North of Oxford Avenue, the street name of Navajo Street changes to Windermere Street.

The Oxford Avenue intersections of Santa Fe Drive and Navajo Street are signalized. All other study intersections operate under a stop-controlled condition. A stop-controlled intersection is defined as a roadway intersection where vehicle rights-of-way are controlled by one or more “STOP” signs.

No regional or specific improvements for the above described roadways are known to be planned or committed at this time. The study area roadways are built to their ultimate cross-section.

It is further understood that regional pedestrian connections are being studied as part of the Oxford Light Rail Station area planning process currently underway between the City of Englewood and Regional Transportation District (RTD). Recommendations for pedestrian connection improvements are forthcoming.
II. Existing Traffic Conditions

AM and PM Peak Hour traffic counts, as presented in the adjacent traffic study\(^1\) prepared for the Oxford Station Development, were collected at the Oxford Avenue intersections of Santa Fe Drive and Navajo Street, and utilized in this analysis. These counts were adjusted to reflect one year of growth and are shown on Figure 3.

The Signalized and Unsignalized Intersection Analysis techniques, as published in the Highway Capacity Manual (HCM) by the Transportation Research Board and as incorporated into the SYNCHRO computer program, were used to analyze the study intersections for existing traffic conditions. These techniques allow for determination of intersection Level of Service (LOS) based on the congestion and delay of each traffic movement. Base signal timing data for the Oxford Avenue intersections of Santa Fe Drive and Navajo Street was obtained from City Staff and used throughout this analysis.

The LOS analyses results for existing conditions are summarized in Table 1.

Definitions of Levels of Service are given in Appendix A, and capacity worksheets are provided in Appendix B.

<table>
<thead>
<tr>
<th>INTERSECTION</th>
<th>AM PEAK HOUR</th>
<th>PM PEAK HOUR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Santa Fe Drive / Oxford Avenue (Signalized)</td>
<td>D (38.2)</td>
<td>D (49.7)</td>
</tr>
<tr>
<td>Oxford Avenue / Navajo Street (Signalized)</td>
<td>B (15.1)</td>
<td>B (18.1)</td>
</tr>
</tbody>
</table>

Key: Signalized Intersections: Level of Service (Control Delay in sec/veh)

Existing Traffic Analysis Results

Under existing conditions, operational analysis shows that the signalized intersection of Santa Fe Drive and Oxford Avenue has an overall peak hour operation at LOS D. The intersection of Oxford Avenue and Navajo Street operates at LOS B, overall, in peak traffic hours.

Figure 3
EXISTING TRAFFIC Volumes & Intersection Geometry
AM / PM Peak Hour (ADT): Average Daily Traffic
III. Future Traffic Conditions without the Proposed Development

Normally, an annual growth rate is applied to existing traffic volumes to account for projected increases in background traffic for the short and long term analysis horizons. This is done to consider intersection operations and public roadway improvements possibly needed to accommodate regional transportation demands.

To account for projected increases in background traffic for Year 2015, a compounded annual growth rate of approximately 1.59 percent and 2.54 percent was applied to Oxford Avenue and Navajo Street, respectively. These growth rates were used to be consistent with the Oxford Station traffic analysis. Also included in background traffic volumes are projected site-generated traffic volumes from the Oxford Station development. No long term (Year 2035) background analysis was considered in this study since the public area around Oxford Avenue and Navajo Street is built out, and the expected completion of adjacent development (e.g., Oxford Station) is expected before Year 2015.

Pursuant to the non-committed area roadway improvements discussion provided in Section I along with Oxford Avenue and Navajo Street being built to their ultimate roadway sections, Year 2015 background traffic condition assumes no roadway improvements to accommodate regional transportation demands. This assumption provides for a conservative analysis.

Figure 4 shows the projected background traffic volumes, including adjacent Oxford Station development traffic, and intersection geometry for Year 2015.
Figure 4

BACKGROUND TRAFFIC - YEAR 2015
Volumes & Intersection Geometry
AM / PM Peak Hour
(ADT): Average Daily Traffic
As with existing traffic conditions, the operations of the study intersections were analyzed under background conditions, without the proposed development, using the SYNCHRO computer program. Background traffic level of service analyses results for Year 2015 are listed in Table 2.

Definitions of Levels of Service are given in Appendix A, and capacity worksheets are provided in Appendix B.

<table>
<thead>
<tr>
<th>INTERSECTION, LANE GROUPS</th>
<th>LEVEL OF SERVICE AM PEAK HOUR</th>
<th>LEVEL OF SERVICE PM PEAK HOUR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Santa Fe Drive / Oxford Avenue (Signalized)</td>
<td>D (42.0)</td>
<td>D (54.4)</td>
</tr>
<tr>
<td>Oxford Avenue / Navajo Street (Signalized)</td>
<td>B (15.8)</td>
<td>B (18.4)</td>
</tr>
</tbody>
</table>

Key: Signalized Intersections: Level of Service (Control Delay in sec/veh)

Background Traffic Analysis Results – Year 2015

Operation analysis for Year 2015 background condition indicates that the signalized intersection of Santa Fe Drive and Oxford Avenue experiences an overall LOS D operation during peak traffic hours.

The signalized intersection of Oxford Avenue and Navajo Street continue to have an overall peak hour operation at LOS B, similar to existing conditions.
IV. Proposed Project Traffic

Trip Generation

Standard traffic generation characteristics compiled by the Institute of Transportation Engineers (ITE) in their report entitled Trip Generation, 8th Edition, were applied to proposed land use in order to estimate average daily traffic (ADT), AM Peak Hour, and PM Peak Hour vehicle trips for the development site.

A vehicle trip is defined as a one-way vehicle movement from a point of origin to a point of destination.

Trip generation rates used in this study are presented in Table 3.

<table>
<thead>
<tr>
<th>LAND USE</th>
<th>UNIT</th>
<th>TRIP GENERATION RATES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>24</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HOUR</td>
</tr>
<tr>
<td>220 Apartments</td>
<td>DU</td>
<td>6.65</td>
</tr>
</tbody>
</table>

Key: DU = Dwelling Units

Table 4 illustrates projected average daily traffic (ADT), AM Peak Hour, and PM Peak Hour traffic volumes likely generated by the proposed development.
Table 4 illustrate that the proposed development has the potential to generate approximately 692 daily trips with 53 of those occurring during the AM Peak Hour and 64 during the PM Peak Hour.

**Adjustments to Trip Generation Rates**

A development of this particular type is not likely to attract trips already on the adjacent roadway system (defined by ITE Trip Generation Handbook as pass-by trips). No pass-by trip reduction was taken in this study. However, the Oxford Light Rail Station is located within close proximity to the proposed development. As such, a twenty (20) percent reduction was applied to site trip generation to account for the likelihood of transit use from a transit oriented development (TOD). This reduction percentage is considered conservative.

**Trip Distribution**

The overall directional distribution of site-generated traffic was determined based on proposed and existing area land uses, allowed intersection turning movements, and available roadway network.

Overall trip distribution patterns for the proposed development are shown on Figure 5.

**Project Trip Assignment**

Traffic assignment is how generated and distributed vehicle trips are expected to be loaded onto the available roadway network.

Applying trip distribution patterns to site-generated traffic provides the site-generated trip assignments shown on Figure 5.
Figure 5
DISTRIBUTION (%): Overall SITE-GENERATED TRAFFIC AM / PM Peak Hour
V. Future Traffic Forecasts with Proposed Development

Site-generated traffic was added to background traffic volumes to develop total traffic projections.

For analysis purposes, it was assumed that development build out would occur by end of Year 2015.

No roadway improvements were assumed for analysis in the total traffic condition.

Projected Year 2015 total traffic volumes and intersection geometry are shown on Figure 6.
<table>
<thead>
<tr>
<th></th>
<th>Santa Fe Drive</th>
<th>Windermere Street</th>
<th>Navajo Street</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>167 / 257</td>
<td>2450 / 2683</td>
<td>61 / 307</td>
<td>288 / 222</td>
</tr>
<tr>
<td>391 / 363</td>
<td>-179 / 128</td>
<td>-11 / 8</td>
<td>183 / 68</td>
</tr>
<tr>
<td>139 / 328</td>
<td>-240 / 288</td>
<td>45 / 175</td>
<td>48 / 47</td>
</tr>
<tr>
<td>PM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-352 / 299</td>
<td>266 / 465</td>
<td>-3 / 11</td>
<td>146 / 288</td>
</tr>
<tr>
<td>-137 / 265</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Figure 6**
**TOTAL TRAFFIC - YEAR 2015**
**Volumes & Intersection Geometry**
**AM / PM Peak Hour**
**(ADT): Average Daily Traffic**
VI. Project Impacts

Peak Hour Intersection Levels of Service

As with background traffic, the operations of the study intersections were analyzed under projected total traffic conditions using the SYNCHRO computer program. Table 5 summarizes total traffic level of service analysis results for Year 2015.

Definitions of Levels of Service are given in Appendix A, and capacity worksheets are provided in Appendix B.

<table>
<thead>
<tr>
<th>INTERSECTION</th>
<th>LANE GROUPS</th>
<th>LEVEL OF SERVICE</th>
<th>AM PEAK HOUR</th>
<th>PM PEAK HOUR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Santa Fe Drive / Oxford Avenue (Signalized)</td>
<td></td>
<td>D (44.2)</td>
<td>D (54.7)</td>
<td></td>
</tr>
<tr>
<td>Oxford Avenue / Navajo Street (Signalized)</td>
<td></td>
<td>B (17.5)</td>
<td>B (18.9)</td>
<td></td>
</tr>
</tbody>
</table>

Key: Signalized Intersections: Level of Service (Control Delay in sec/veh)

Total Traffic Analysis Results upon Development Build Out

Table 5 shows that the signalized intersection of Santa Fe Drive and Oxford Avenue, upon development build out with conservative assumptions defined in this study and by Year 2015, will have operations similar to existing and background conditions.

Table 5 further illustrates how the Oxford Avenue and Navajo Street intersection is projected to maintain LOS B operation during peak traffic hours.
VII. Conclusion

This traffic impact study addressed the capacity, geometric, and control requirements associated with Navajo Apartments. The proposed residential development is located on Navajo Street between Oxford Avenue and Quincy Avenue in Englewood, Colorado.

As coordinated with City Staff, the study area examined in this analysis encompasses the Oxford Avenue intersections with Santa Fe Drive and Navajo Street.

Analysis was conducted for critical AM Peak Hour and PM Peak Hour traffic operations for existing traffic conditions, Year 2015 background traffic conditions, and Year 2015 total traffic conditions.

Analysis of existing traffic conditions indicates that the studied signalized intersection of Santa Fe Drive and Oxford Avenue has overall peak hour operations at LOS D. Moreover, the signalized intersection of Oxford Avenue and Navajo Street has overall LOS B operations during peak traffic hours.

Without the proposed development, Year 2015 background operational analysis indicates that study intersections will continue to experience moderate to good traffic operations.

Analysis of future traffic conditions indicates that the addition of site-generated traffic is expected to create no discernable impact to traffic operations of the existing surrounding roadway system. With all conservative assumptions defined in this analysis, existing intersections along the Oxford Avenue study area are projected to operate at future levels of service comparable to existing and background conditions during peak traffic hours.
The following information can be found in the Highway Capacity Manual, Transportation Research Board, 2000: Chapter 10 – Urban Streets Concepts Signalized Intersections and Chapter 17 – Unsignalized Intersections.

**Level Of Service (LOS) for Signalized Intersections**

Levels of service are defined to represent reasonable ranges in control delay.

**LOS A**
Describes operations with low control delay, up to 10 s/veh. This LOS occurs when progression is extremely favorable and most vehicles arrive during the green phase. Many vehicles do not stop at all. Short cycle lengths may tend to contribute to low delay values.

**LOS B**
Describes operations with control delay greater than 10 and up to 20 s/veh. This level generally occurs with good progressions, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of delay.

**LOS C**
Describes operations with control delay greater than 20 and up to 35 s/veh. These higher delays may result from only fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at the level. Cycle failure occurs when a given green phase does not serve queued vehicles, and overflows occur. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.

**LOS D**
Describes operations with control delay greater than 35 and up to 55 s/veh. At LOS D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent.

**LOS E**
Describes operations with control delay greater than 55 and up to 80 s/veh. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent.

**LOS F**
Describes operations with control delay in excess of 80 s/veh. This level, considered unacceptable to most drivers, often occurs with over saturation, that is, when arrival flow rates exceed the capacity of lane groups. It may also occur at high v/c ratios with many individual cycle failures. Poor progression and long cycle lengths may also contribute significantly to high delay levels.

**Level of Service (LOS) for Unsignalized TWSC Intersections**

<table>
<thead>
<tr>
<th>Level of Service</th>
<th>Average Control Delay (s/veh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0 - 10</td>
</tr>
<tr>
<td>B</td>
<td>&gt; 10 - 15</td>
</tr>
<tr>
<td>C</td>
<td>&gt; 15 - 25</td>
</tr>
<tr>
<td>D</td>
<td>&gt; 25 - 35</td>
</tr>
<tr>
<td>E</td>
<td>&gt; 35 - 50</td>
</tr>
<tr>
<td>F</td>
<td>&gt; 50</td>
</tr>
</tbody>
</table>
I. CALL TO ORDER

The regular meeting of the City Planning and Zoning Commission was called to order at 7:00 p.m. in the City Council Chambers of the Englewood Civic Center, Chair Brick presiding.

Present: Bleile, Roth, King, Welker, Knoth (entered at 7:05), Brick, Kinton, Townley

Absent: Fish, Freemire (alternate), Excused

Staff: Alan White, Community Development Director
Chris Neubecker, Senior Planner
Brook Bell, Planner II
Nancy Reid, Assistant City Attorney

II. APPROVAL OF MINUTES

May 7, 2013

Roth moved: Kinton seconded: TO APPROVE THE MAY 7, 2013 MINUTES

Chair Brick asked if there were any modifications or corrections. There were none.

AYES: Roth, Welker, King, Brick, Kinton, Townley
NAYS: None
ABSTAIN: Bleile
ABSENT: Fish, Knoth

Motion carried.

III. PUBLIC HEARING

CASE ZON2013-001, NAVAJO APARTMENTS PLANNED UNIT DEVELOPMENT
Welker moved:
Bleile seconded: TO OPEN THE PUBLIC HEARING

AYES: Bleile, Roth, Welker, King, Brick, Kinton, Townley
NAYS: None
ABSTAIN: None
ABSENT: Fish, Knoth

Motion carried.

Mr. Roth noted he wanted to make a statement that he shares the same surname as the engineering firm on this project, but is not aware of any relationship to them.

Mr. Bell, Planner II, was sworn in and presented the case. Highlights of the proposed PUD include:

- Rezoning from I-1 Light Industrial District to Navajo Apartments Planned Unit Development to allow a maximum of 146 residential apartment units.
- Property is located mid-block on the 4200 block of South Navajo Street and is approximately 800' south of RTD's Oxford Light Rail Station.
- Land to the south and east of the subject property is zoned I-1 Light Industrial. Land to the north was recently rezoned to the Oxford Station TOD PUD. Land to the west is not within the City of Englewood limits.
- The subject property is owned by the Developer's father and was the former location of his cat litter manufacturing company that moved to a larger facility in northwest Englewood.
- Multi-unit dwellings are not permitted in the I-1 zone district; property cannot be redeveloped for residential under this zoning.
- The applicant conducted the required neighborhood meeting on November 15, 2012. Notice was mailed to property owners and occupants of property within 1000 feet of the site.
- Final PUD documents were submitted on April 29, 2013.
- The proposed PUD was referred to Tri-County Health, RTD, the Colorado Department of Transportation, the City of Sheridan, Xcel Energy, Century Link and Comcast; there were no objections to the project.
- The PUD would include a maximum of 146 residential apartment units.
- Majority of the parking is on the surface with a portion tucked underneath the second story of the building.
- Site Plan includes landscaping and all new and existing utilities within the property and abutting right-of-way will be placed underground.
- All permitted industrial uses must cease once a Certificate of Occupancy for any residential or commercial use is issued for any portion of the property.
- Architectural Character, Residential Density and Setbacks were reviewed.
The maximum allowed building height for residential uses is 75 feet. The maximum allowed building height in the PUD for Public/Institutional Uses, Commercial Uses, and Industrial Uses is 100 feet.

The proposed Navajo Apartments PUD requires 1 parking space for each unit, plus 1 guest space for every 10 units.

The Navajo Apartments PUD will provide 1 bicycle space for every 5 units to be accommodated with bike racks.

A traffic impact study was performed for the project. The study was reviewed by the Public Works Traffic Division and CDOT and they concurred with its findings.

The Navajo Apartments proposes a minimum of 15% of the property be landscaped and over 73% of that will be "living" landscape.

Park dedication fee will be approximately $54,400.

Questions from Commission

- Have all Staff concerns been taken care of?
- Are sizes of parking spaces an issue?
- Does property fall within 1000 feet of a former landfill?
- Is there any known contamination on site?
- Is parking along Navajo Street going to be allowed after this development is completed?
- Does the Code pertaining to landscaping maintenance and replacement apply to this project?
- Why is it important to grant this PUD now rather than wait till the Light Rail Corridor Plan is complete?
- Does this PUD meet the minimum size for a PUD in terms of overall area?
- How does the property setback match up with the development edge in terms of the property to the north?
- What was the reason for increasing the height of the sign from 25' to 55'?
- If no work commences when would the PUD expire?

Alan White, Director of Community Development was sworn and stated the proposed Planned Unit Development, in terms of land use and the density proposed, is consistent with the light rail plan that the City's consultants prepared. That plan is unofficial right now, but Staff does plan on taking it through the adoption process and make it an official sub-area plan of the City.

Bryan Elsey was sworn in. He provided a brief background on his company and why they chose this site for an infill development. He then showed a PowerPoint presentation on what their vision is for the project.
Commission comments included:

- Will you manage site after completion of project?
- How will you regulate access to parking?
- What are your plans for snow storage?
- Where will the 55' sign be located?
- Have you considered roof top gardens?
- What is the area of the building footprint including the podium parking?
- What is the height of the podium parking?
- Describe underground detention system.
- Seems to be a lack of bicycle storage on site.
- Internal sidewalks seem narrow.
- Are there plans to increase water and sewer capacity along Navajo Street?
- What is the possibility of a pedestrian bridge across Oxford Avenue to the Englewood Light Rail Station?

Katie Sukalski, 1090 Urban St., Lakewood, was sworn in. She addressed concerns regarding the layout for the underground detention system and the presence of an existing storm sewer system in Navajo Street.

Mike Rocha, Traffic Engineer was sworn in. He addressed questions from the Commission regarding pedestrian calculations.

PUBLIC TESTIMONY

Peter Leising, 4561 S Jason St was sworn in. He addressed concerns regarding pedestrian connectivity, turn arrows, and the possibility of a pedestrian bridge over Santa Fe. He asked about the timeline for the Oxford Station project. He felt the proposed Navajo Apartments PUD project was a great improvement to the area.

Brook addressed questions posed by Mr. Leising.

Bryan Elsey summation. He stated they are excited to be before the Planning and Zoning Commission and would love to do the project. He said he feels the project fits the area and would appreciate the Commission’s support.

Knoth moved:
Bleile seconded: TO CLOSE THE PUBLIC HEARING

AYES: Bleile, Roth, Welker, Knoth, King, Brick, Kinton, Townley
NAYS: None
Motion carried.

Knoth moved:  
King seconded:  

CASE #ZON2013-001, REZONING OF 4201 SOUTH NAVAJO STREET FROM I-1 (LIGHT INDUSTRIAL) TO A PUD (PLANNED UNIT DEVELOPMENT) TO ALLOW RESIDENTIAL USES BE RECOMMENDED FOR APPROVAL TO CITY COUNCIL WITH THE FOLLOWING CONDITION:

1. That the final Navajo streetscape section may vary from the curb alignment, sidewalk width and location, and associated landscape zone shown on the PUD; and that the final streetscape section for the Navajo Apartments PUD will be approved by the City Manager or designee in conjunction with the building permit.

Discussion

The Commission members stated the project is the kind of development they want for this area, liked the concept presented, takes us closer to our goals of having TOD development near the City’s transit stations, provides an opportunity for a different type of housing, the developer is experienced in this type of development and is the right density and type of project needed near a light rail station.

Commission member’s concerns included width of internal sidewalks, bicycle storage, utilities, street development, pedestrian connectivity and will public art be included in the project.

AYES:  Bleile, Roth, Welker, Knoth, King, Brick, Kinton, Townley
NAYS:  None
ABSTAIN:  None
ABSENT:  Fish

Motion carried.

IV. PUBLIC FORUM

No one wished to address the Commission.

V. ATTORNEY’S CHOICE

Ms. Reid had nothing further to report.
VI. STAFF’S CHOICE

Director White stated the Mr. Roth’s Citizen of the Year celebration at the Malley Center was very nice.

Upcoming meetings include:

- May 21st: Cancelled
- June 4th: Study Session, Breweries, Distilleries and Wineries
- June 17th: Joint meeting with City Council to discuss the Comprehensive Plan
- June 18th: Cancelled

VII. COMMISSIONER’S CHOICE

The members congratulated Mr. Roth’s appointment as Englewood’s Citizen of the Year.

The meeting adjourned at 8:40 p.m.

Barbara Krecklow, Recording Secretary
CITY OF ENGLEWOOD PLANNING AND ZONING COMMISSION

IN THE MATTER OF CASE #ZON2013-001 )
FINDINGS OF FACT, CONCLUSIONS )
AND RECOMMENDATIONS FOR THE )
REZONING OF 4201 S NAVAJO STREET )
FROM I-1 (LIGHT INDUSTRIAL) TO A PUD )
(PLANNED UNIT DEVELOPMENT) TO )
ALLOW RESIDENTIAL USES )
INITIATED BY: )
Elsey Partners, LLC )
1532 College Avenue F19 )
Manhattan, Kansas 66502 )

Commission Members Present: Brick, Knoth, Roth, King, Bleile, Kinton, Townley, Welker
Commission Members Absent: Fish, Freemire (alternate)

This matter was heard before the City Planning and Zoning Commission on May 14, 2013, in the City Council Chambers of the Englewood Civic Center.

Testimony was received from Staff, the applicant and the public. The Commission received notice of Public Hearing, Certification of Posting, and Staff Report from Staff, which were incorporated into and made a part of the record of the Public Hearing.

After considering statements of the witnesses, and reviewing the pertinent documents, the members of the City Planning and Zoning Commission made the following Findings and Conclusions.

FINDINGS OF FACT

1. THAT the application was filed by Elsey partners, LLC seeking approval to rezone 4201 South Navajo Street from I-1 (Light Industrial) to PUD (Planned Unit Development) to allow residential uses.

2. THAT Public Notice of the Public Hearing was given by publication in the Englewood Herald on April 26, 2013 and was on the City’s website from April 18, 2013 through May 14, 2013.

3. THAT the property was posted as required, said posting setting forth the date, time, and place of the Public Hearing.
4. THAT pursuant to the Planned Unit Development procedure, a pre-application meeting was held with Staff in the fall of 2012 and the application was reviewed by City Departments and other affected outside agencies.

5. THAT pursuant to the Planned Unit Development procedure, the applicant conducted a neighborhood meeting on November 15, 2012.

6. THAT notice of the neighborhood meeting was mailed to property owners and occupants of property within 1000 feet of the site.

7. THAT the final Navajo Apartments PUD packet was submitted on April 29, 2013.

8. THAT the PUD would allow a maximum of 146 residential apartment units on the property.

9. THAT the applicant will provide 1 parking space for each unit, plus 1 guest space for every 10 units.

10. THAT the applicant will provide 1 bicycle space for every 5 units to be accommodated with bike racks.

11. THAT the traffic impact study was reviewed by the Public Works Traffic Division and CDOT; both concurred with its findings.

12. THAT Planner Bell testified the request is for the rezoning of 4201 South Navajo Street from I-1 (light industrial) to a PUD (Planned Unit Development) to allow residential uses. Mr. Bell testified to the criteria the Commission must consider when reviewing a PUD application. Mr. Bell further testified that Staff recommends approval of the amendment with one condition.

13. THAT the Navajo Apartments Planned Unit Development is in conformance with Roadmap Englewood: 2003 Englewood Comprehensive Plan.

CONCLUSIONS

1. THAT the application was filed by Elsey Partners, LLC, seeking approval to rezone 4201 South Navajo Street from I-1 (light industrial) to a PUD (Planned Unit Development) to allow residential uses.

2. THAT proper notification of the date, time, and place of the Public Hearing was given by publication in the official City newspaper, posting on the City's website and by posting of the property for the required length of time.

3. THAT all testimony received from staff members, the applicant and the public has been made part of the record of the Public Hearing.
4. **THAT** the request meets the criteria for a PUD.

5. **THAT** the PUD is a positive improvement for the property and is the best use for the site.

6. **THAT** all permitted industrial uses must cease once a Certificate of Occupancy for any residential or commercial use is issued for any portion of the property.

7. **THAT** the proposed Navajo Apartments Planned Unit Development is in conformance with Roadmap Englewood: 2003 Englewood Comprehensive Plan.

8. **THAT** the Navajo Apartments PUD is substantially consistent with the goals, objectives, design guidelines, policies, and other ordinances, laws and requirements of the City.

**DECISION**

**THEREFORE,** it is the decision of the City Planning and Zoning Commission that the application filed by Elsey Partners, LLC for the rezoning of 4201 South Navajo Street from I-1 (light industrial) to a PUD (Planned Unit Development) to allow residential uses be recommended to City Council for approval.

The decision was reached upon a vote on a motion made at the meeting of the City Planning and Zoning Commission on May 14, 2013, by Mr. Knoth, seconded by Mr. King, which motion states:

**CASE #ZON2013-001, REZONING OF 4201 SOUTH NAVAJO STREET FROM I-1 (LIGHT INDUSTRIAL) TO A PUD (PLANNED UNIT DEVELOPMENT) TO ALLOW RESIDENTIAL USES BE RECOMMENDED FOR APPROVAL TO CITY COUNCIL WITH THE FOLLOWING CONDITION:**

1. That the final Navajo streetscape section may vary from the curb alignment, sidewalk width and location, and associated landscape zone shown on the PUD; and that the final streetscape section for the Navajo Apartments PUD will be approved by the City Manager or designee in conjunction with the building permit.

**AYES:** King, Knoth, Roth, Bleile, Welker, Townley, Kinton, Brick

**NAYS:** None

**ABSTAIN:** None

**ABSENT:** Fish

The motion carried.
These Findings and Conclusions are effective as of the meeting on May 14, 2013.

BY ORDER OF THE CITY PLANNING & ZONING COMMISSION

John Brick, Chair
BY AUTHORITY

ORDINANCE NO. ___
SERIES OF 2013

COUNCIL BILL NO. 21
INTRODUCED BY COUNCIL
MEMBER ____________

A BILL FOR

AN ORDINANCE APPROVING THE REZONING OF 4201 SOUTH NAVAJO STREET FROM I-1 TO NAVAJO APARTMENTS PLANNED UNIT DEVELOPMENT (PUD).

WHEREAS, Bruce Elsey and 4201 South Navajo LLC are the owners of the property at mid-block on the 4200 Block of South Navajo Street between Oxford Avenue to the North and Quincy Avenue to the South, also known as 4201 South Navajo Street, Englewood, Colorado; and

WHEREAS, the 4201 South Navajo Street site consists of two parcels totaling 2.09 acres; and

WHEREAS, Elsey Partners, LLC submitted an application to the City to rezone the parcels from I-1 Light Industrial District to the Navajo Apartments Planned Unit Development (PUD) which allows various residential, commercial and industrial uses; and

WHEREAS, the property is approximately 800 feet South of RTD’s Oxford Light Rail Station; and

WHEREAS, land to the South and East of the subject property is zoned I-1 Light Industrial District and contains industrial uses; land to the North of the subject property was recently rezoned to the Oxford Station Transit Oriented Development PUD which will include 252 residential apartment units with an option for mixed commercial uses; and

WHEREAS, the proposed Planned Unit Development (PUD) would allow a maximum of 146 residential apartment units on the property, although the current building plan shows 141 units; and

WHEREAS, all allowed industrial uses shall cease and shall not be grandfathered nor considered legal, non-conforming uses upon the issuance of a Certificate of Occupancy; and

WHEREAS, the proposed 4201 South Navajo Street Planned Unit Development will exceed the development quality standards required by the Englewood Unified Development Code for residential development; and

WHEREAS, the Planning and Zoning Commission held Public Hearing on May 14, 2013.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ENGLEWOOD, COLORADO, AS FOLLOWS:

Section 1. The 4201 South Navajo Planned Unit Development (PUD), for property located in the 4200 Block of South Navajo Street between Oxford Avenue to the North and Quincy Avenue
to the South, in the City of Englewood, Colorado, attached hereto as Exhibit A, is hereby approved with the condition noted below:

That the final Navajo streetscape section may vary from the curb alignment, sidewalk width and location, and associated landscape zone shown on the PUD; and that the final streetscape section for the Navajo Apartments PUD will be approved by the City Manager or designee in conjunction with the building permit.

Introduced, read in full, and passed on first reading on the 3rd day of September, 2013.

Published by Title as a Bill for an Ordinance in the City’s official newspaper on the 6th day of September, 2013.

Published as a Bill for an Ordinance on the City’s official website beginning on the 4th day of September, 2013 for thirty (30) days.

______________________________
Randy P. Penn, Mayor

ATTEST:

Loucrishia A. Ellis, City Clerk

I, Loucrishia A. Ellis, City Clerk of the City of Englewood, Colorado, hereby certify that the above and foregoing is a true copy of a Bill for an Ordinance, introduced, read in full, and passed on first reading on the 3rd day of September, 2013.

______________________________
Loucrishia A. Ellis
NAVAGO APARTMENTS
PLANNED UNIT DEVELOPMENT
A PARCEL OF LAND LOCATED IN THE SOUTHEAST QUARTER OF SECTION 04, TOWNSHIP 5 SOUTH,
RANGE 68 WEST OF THE SIXTH PRINCIPAL MERIDIAN,
CITY OF ENGLEWOOD, COUNTY OF ARAPAHOE, STATE OF COLORADO
4201 SOUTH NAVAGO STREET

BACKGROUND
This application is pursuant to a Development Agreement dated November 15, 1989, between the City of Englewood and the Applicant, who is proposing to develop the site shown on the map included as Exhibit A attached hereto. The Applicant proposes to construct a multi-family residential development comprising 470 apartment units, along with associated parking and recreational facilities. The site is located within the City of Englewood and is currently zoned PD (Planned Unit Development) under the Comprehensive Plan. The proposed development is expected to provide a significant contribution to the growth and development of the City, and it is anticipated that it will be well-integrated into the existing community.

INFORMATION CONCERNING THE APARTMENT BUILDING
The proposed development will consist of five three-story apartment buildings, each containing 94 units, along with a central parking structure. The buildings will be designed to provide a mix of one- and two-bedroom units, along with commercial space on the ground floor. The project will include amenities such as a swimming pool, playground, and community center.

PUBLIC-PRIVATE PARTNERSHIP
The proposed development is expected to be financed through a combination of private and public funds. The City of Englewood will provide infrastructure improvements, and the Applicant will contribute the land and provide funding for the development. The project will be designed to meet the City's sustainability goals, including the use of green building materials and energy-efficient construction practices.

FINANCING AND ARCHITECTURAL DESIGN
The project will be financed through a combination of private and public funds, including Federal Housing Administration (FHA) insured loans, Community Development Block Grant (CDBG) funds, and City of Englewood bond issues. The architectural design is being developed by a local firm with expertise in multi-family housing, and the project will be designed to meet the City's aesthetic standards and不符合当地的建筑规范。

SITE PLAN
The site plan includes the proposed locations of buildings, parking areas, and open spaces. The plan also includes the proposed access roads and connections to the City's utility systems. The site is located on a flat, level area, and the proposed development will be designed to minimize the impact on the existing landscape.

OTHER INFORMATION
The development will comply with all applicable local, state, and federal regulations, including those related to zoning, building codes, and environmental protection. The project will be designed to provide a safe and comfortable living environment for the residents, and it is expected to contribute positively to the surrounding community.

This application is for your consideration. The City of Englewood is seeking feedback from the public and interested parties to ensure that the proposed development meets the needs and expectations of the community. Comments and suggestions can be submitted to the City Planning Division at the address below.

City of Englewood
Planning Division
4201 South Navajo Street
Englewood, CO 80113

Phone: 303-762-3300
Fax: 303-762-3371

Please submit your comments by email or mail no later than 30 days from the date of this notice.

City Planning Division
NAVAJO APARTMENTS
PLANNED UNIT DEVELOPMENT
PARCEL OF LAND LOCATED IN THE SOUTHEAST QUARTER OF SECTION 04, TOWNSHIP 5 SOUTH, RANGE 88 WEST OF THE SIXTH PRINCIPAL MERIDIAN,
CITY OF ENGLEWOOD, COUNTY OF ARAPAHOE, STATE OF COLORADO
4201 SOUTH NAVAJO STREET

LEGAL DESCRIPTION:
PARCEL A
Lot 5, P:6, T:5, R:88 W6PM, S:ENGLEWOOD CITY

CERTIFICATION:
To Brian Cloy, and to lead title examiner.
This is to certify that the plat of plat and the records on which it is based were made in accordance with the 2011 Virginia Standards Legal Surveyors that survey land trees.

NOTES:
1. This survey was prepared from the records of a title commitment prepared by land title company on September, 2012 and the title search was done by us to determine accuracy of boundaries as shown on the plat.
2. According to standards, you must conduct an initial field check within one year after you first accepted the plat. In 30 days, any part of the plat not surveyed within one year must be surveyed by a registered land surveyor.
3. Any person who reasonably relies, alters or deviates from any plat that is not made or surveyed by a registered land surveyor shall be certifying the plat is not made by a registered land surveyor.

Dated: Sept. 11, 2012
L. Brian Cloy
Title Examiner

END
NAVAJO APARTMENTS
PLANNED UNIT DEVELOPMENT
A PARCEL OF LAND LOCATED IN THE SOUTHEAST QUARTER OF SECTION 04, TOWNSHIP 5 SOUTH, RANGE 68 WEST OF THE SIXTH PRINCIPAL MERIDIAN, CITY OF ENGLEWOOD, COUNTY OF ARAPAHOE, STATE OF COLORADO
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INITIATED BY
Utilities Department

STAFF SOURCE
Stewart H. Fonda, Director of Utilities

COUNCIL GOAL AND PREVIOUS COUNCIL ACTION


RECOMMENDED ACTION

The Englewood Water and Sewer Board recommended Council approval of the 2013 Water Conservation Plan at their July 9, 2013 meeting.

BACKGROUND, ANALYSIS, AND ALTERNATIVES IDENTIFIED

The City of Englewood Utilities Department, recognizing state and federal mandates to reduce water demands in their service area, evaluated the impacts of water conservation on water supply and resource planning. The proposed Water Conservation Plan outlines Englewood's existing water system, history, the community it serves, the public information program, the metering program, leak repair and maintenance and additional proposed water conservation measures.

After reviewing the plan, the Water and Sewer Board then invited Englewood citizens to review the plan and make comments, with a deadline of July 1, 2013. Articles regarding the Conservation Plan and request for comments appeared in the Denver Post “Your Hub” on May 29, 2013, the Englewood Herald in April, 2013 and the Englewood Citizen in the May-June, 2013 issue. The information was also posted on the City of Englewood website and the Utilities webpage from May 1 to July 1, 2013.

Comments received were regarding xeriscaping and maintaining an urban forest, encouraging appropriate and efficient use of water resources, using increased rates for heavier users, using rain barrels and graywater, using water efficient toilets in city buildings and implementing a strong incentive program for flat rate accounts to convert to meter. All public comments received were addressed and a summary is included in the Plan Appendix.

After Council approval, the plan will be submitted to the Office of Water Conservation, the Water Conservation Board and the Department of Natural Resources.

FINANCIAL IMPACT

The Utilities Department received a Water Conservation Planning Grant in the amount of $48,000, with the City matching $20,000 with in-kind services for implementation of a ten-year plan from 2013 to 2022. Approval of the proposed plan would enable Englewood to apply for future state loans, grants and water/wastewater revolving funds.

LIST OF ATTACHMENTS

Proposed Bill for Ordinance
AN ORDINANCE APPROVING THE "ENGLEWOOD UTILITIES DEPARTMENT 2013 WATER CONSERVATION PLAN."

WHEREAS, State and federal mandates require the City to review ways to reduce water demands in its service area; and

WHEREAS, the Colorado Water Conservation Board requires a water conservation plan, approved by the State as a condition of eligibility for a water efficiency grant to implement the City’s Plan; and

WHEREAS, the City has evaluated the impacts of water conservation on the water supply; and

WHEREAS, every seven years Colorado requires an updating of the City’s Water Conservation Plan and Englewood City Council approved a prior Water Conservation Plan on March 11, 1997; and

WHEREAS, the proposed Water Conservation Plan outlines Englewood’s existing water system, its history, the community it serves, the public information program, the metering program, leak repair as well as maintenance and additional proposed water conservation measures; and

WHEREAS, after the planning process, which included public comment, the Englewood Water and Sewer Board recommended Council approval at their July 9, 2013 meeting; and

WHEREAS, the plan, once approved by the City Council, will be submitted to the Office of Water Conservation, The Water Conservation Board and the Department of Natural Resources for their approval; and

WHEREAS, State approval of the proposed plan will enable Englewood to apply for future state loans, grants and water/wastewater revolving funds.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ENGLEWOOD, COLORADO, THAT:

Section 1. The City Council of the City of Englewood hereby approves the “City of Englewood Utilities Department 2013 Water Conservation Plan”, attached hereto as Exhibit A.
Introduced, read in full, and passed on first reading on the 3rd day of September, 2013.

Published by Title as a Bill for an Ordinance in the City's official newspaper on the 6th day of September, 2013.

Published as a Bill for an Ordinance on the City's official website beginning on the 4th day of September, 2013 for thirty (30) days.

ATTEST:

---

Randy P. Penn, Mayor

Loucrishia A. Ellis, City Clerk

I, Loucrishia A. Ellis, City Clerk of the City of Englewood, Colorado, hereby certify that the above and foregoing is a true copy of a Bill for an Ordinance, introduced, read in full, and passed on first reading on the 3rd day of September, 2013.

---

Loucrishia A. Ellis
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EXECUTIVE SUMMARY

The City of Englewood, Colorado (“City” or “Englewood”) is a suburban metropolitan community located south of Denver in Arapahoe County. During the past five years, the City of Englewood’s population has hovered around 30,000.

Englewood has developed a Water Conservation Plan in accordance with the Water Conservation Act of 2004 and to meet the provisions of Colorado Revised Statute section 37-60-126. As part of CRS 37-60-126, a State-approved Plan will qualify Englewood for funding from the Colorado Water Conservation Board (CWCB) and the Colorado Water Resources and Power Development Authority for water supply and delivery projects.

In 2011, Englewood’s water customers used approximately 5,606 acre-feet. The City, according to the Planning Department's projection, is not expected to increase its water demand through new growth. Water savings from this water conservation planning effort is estimated to save the 6,721 acre-feet over the planning period of 2013 to 2022.

For some of the selected water conservation measures and programs, estimated savings over the planning period is calculated by compounding the estimated annual water savings per the total number of annual participants. The savings from this planning effort will make a considerable contribution toward the water supplies needed to serve the 2022 demand.

This report documents Englewood’s water system, past and future water use and the water conservation planning process used in accordance with CWCB’s Water Conservation Plan guidelines and policies.

Water Conservation Goals

Englewood has considered water conservation in its planning for many years and has developed a number of measures to promote efficient water use. The City has instituted the following water conservation measures and programs:

- Public Information
- Meter Replacement
  - Englewood Meter Assistance Program (EMAP) - This program helps water customers install meters in homes by allocating a portion of their water bill payment towards the cost of a meter.
- Leak Detection
- Plumbing Code
- Nonpotable and Water Reuse
The City is uncertain of the reduction in water use attributable to the existing water conservation efforts. However, over the ten-year planning period (2013 to 2022), tracking efforts will be implemented to quantify water savings and costs to operate this Water Conservation Plan.

Water savings goals were established for this Water Conservation Plan by completing the following steps:

- Establishing an initial water savings goal estimate
- Selecting water conservation measures or programs to meet those goals
- Comparing the expected water savings to the original goals

In order to select water conservation measures and programs to meet the water savings goals, a universal list of measures and programs were subject to an initial screening, cost-benefit analysis and final screening. This process pared the universal list down to the final selection of measures/programs that Englewood will implement. The screening criteria used consisted of the following:

1. Staff Time
2. Financial implications
3. Political ramifications

The goal for this Water Conservation Plan is to reduce the overall water use by ten percent or 6,721 AF over a ten-year planning period. This savings will come from water use categories that were identified through the planning process for potential water savings:

- Single-Family
- Multi-Family
- Commercial
- Industrial
- Municipal
- Non-Metered Customers – Meter Replacement and EMAP
- Unaccounted-For Losses

The City’s water conservation goals are shown in Table ES-1.
Implementation Plan

All of the proposed water conservation measures and programs chosen will require staff and financial resources for implementation. This will require some strategy in implementing the most beneficial measures first. For illustrative purposes, a three-year schedule has been proposed and should be interpreted that Year 1 is the City’s first priority of projects followed by Year 2 and then Year 3 and will not be within three years exactly. The proposed implementation of this Water Conservation Plan will occur as the necessary resources become available.

Englewood is committed to implementing the selected water conservation programs and will budget money and pursue CWCB water-efficiency grant money to accomplish this goal. Table ES-2 shows the implementation schedule of the selected measures/programs.

Monitoring of the Plan will be completed on an annual basis and a formal update is required by CWCB within seven years. Public feedback is an integral part of this Plan and comments were solicited and incorporated into the final Plan.
Table ES-2 – Implementation Plan for Englewood’s Water Conservation Plan

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</table>
CHAPTER 1 – INTRODUCTION

The City of Englewood, Colorado ("City" or "Englewood") is a suburban metropolitan community located south of Denver in Arapahoe County. Englewood’s beginnings are traced to gold. In the mid-1800s, prospectors on their way to California stopped in Colorado to pan its streams. One of these prospectors was a man from Georgia named William Green Russell. He and 12 other miners found gold in the South Platte River and established a Placer Camp near the confluence of Little Dry Creek and the South Platte River in an area that would eventually become Englewood. Today’s Englewood is a distinct reflection of its colorful history. There is still a focus on transportation, education, and the arts, and Englewood boasts more jobs and businesses per square mile than any other city in the Rocky Mountain region. Englewood is located west of the Denver Tech Center, north of Littleton and south of Denver, which gives it its strong employment base.

While Englewood, according to the Planning Department's projection, is not expected to increase its water demand through new growth, a number of multi-family housing projects are being planned. The City of Englewood was incorporated in 1903 with a land area of 4,410 acres. Fifty-eight percent of the land is residential, 35 percent industrial/commercial and seven percent public. The City is landlocked with no appreciable amount of land that can be annexed. During the past five years, the City of Englewood's population has hovered around 30,000.

Englewood has developed this Water Conservation Plan in accordance with the Water Conservation Act of 2004 and to meet the provisions of Colorado Revised Statute section 37-60-126. As part of CRS 37-60-126, a State-approved Plan will qualify Englewood for funding from the Colorado Water Conservation Board (CWCB) and the Colorado Water Resources and Power Development Authority for water supply and delivery projects.

Englewood is committed to optimizing its water supplies and system through practical water conservation practices. Englewood has also been able to provide water to neighboring communities in need. With added efficiency, the City may have more water to allocate for lease (sale of raw water) outside the City. The planning horizon for this plan is ten years, from 2013 to 2022.
CHAPTER 2 – PROFILE EXISTING WATER SYSTEM

Characteristics of Englewood’s Water Supply System

Population and Service Area

The 2010 Census data for Englewood shows a population of 30,255 people. The following table shows Englewood’s population for the last six years.

Table 2.1 – City of Englewood Historical Population

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>32,191</td>
</tr>
<tr>
<td>2008</td>
<td>32,191</td>
</tr>
<tr>
<td>2009</td>
<td>32,191</td>
</tr>
<tr>
<td>2010</td>
<td>30,255</td>
</tr>
<tr>
<td>2011</td>
<td>30,255</td>
</tr>
<tr>
<td>2012</td>
<td>30,255</td>
</tr>
<tr>
<td>Average</td>
<td>31,223</td>
</tr>
</tbody>
</table>

Prior to 1952, the City of Englewood was provided water service by the Denver Water Board. In response to new water meter requirements and proposed higher rates for water service, the citizens of Englewood voted in September 1948 to issue bonds to develop an independent water system to serve the City.

Attorney Marcus Shivers and Charles Allen, the mayor during this period, were the guiding forces in the development of Englewood’s water system. Their task was not only to build a water treatment and pump facility to distribute the treated water but also to acquire an adequate raw water supply.

Having secured water rights, the necessary facilities to deliver raw water for treatment and distribution to the City were built. An intake facility to pump raw water was constructed at Union Avenue along the side of the South Platte River. The intake facility consisted of a diversion dam, intake gate, a small reservoir and a pump station. A pipeline was then constructed from the facility to the new treatment plant located at S. Windermere Street and W. Layton Avenue. The treatment plant had a capacity of 25 million gallons per day (MGD) and began operation in April 1952. Two 3-MG reservoirs were also constructed during the fifties to supplement the distribution system supply.
Over the following years, many improvements were made to the system to meet water use demands, pressure problems, and to enhance treatment. The following figures show Englewood’s service area and distribution system.

Figure 2.1 – Englewood Water Service Area
Figure 2.2 – Englewood Water Distribution System
To meet future demand, the raw water supply system was supplemented with several major supply and storage projects to increase the yield of Englewood’s water resources. The City constructed McLellan Reservoir on Dad Clark Gulch located near County Line Road and S. Santa Fe. The 6,000 acre-foot reservoir was constructed to provide storage to augment the raw water supply in dry years. Other projects included the piping of the City Ditch and McBroom Ditch, the rehabilitation of the Boreas Pass Ditch, and upgrades to the Union Avenue pumping facilities and associated piping. Also, the City constructed three deep wells to augment the raw water supply.

The City was plagued with water pressure problems during the sixties and seventies as Englewood's population grew. There was insufficient water pressure at several points in the system and the quantities of available water were less than adequate. Several studies were performed during this period with the intent of solving the pressure and supply problem. Several improvements were constructed including the 500,000 gallon Zuni tank, a 6-MG reservoir, and several pump stations in the distribution system. In 1977, the City, still plagued with water pressure problems, adopted a multi-pressure zone system. The water distribution system was segmented into three separate and independent pressure zones. Several large transmission mains were installed to deliver a water supply to the separate zones. Along with the large transmission mains, a 200,000 gallon elevated tank was constructed on Sherman Street south of Bellevue. This zoned system proved to finally resolve the pressure supply problem.

The quality of the South Platte River at the Union Avenue Diversion pump station was excellent when the City system was initiated in 1952. The original plant was a softening plant. That was abandoned when the City went to coagulation/filtration. Over the last few decades, several conditions on the South Platte River upstream of Union Avenue led to the degradation of the water. The treatment plant was therefore partially upgraded in 1977, and then more completely so in 1980. The upgrade increased the treatment capacity to 34 MGD; added new chemical coagulation and a multimedia filtration system. By the mid-nineties, the increased nutrients and algae in the South Platte River once again triggered improvements. To meet the challenges, the treatment plant was converted from a direct filtration process to a conventional treatment process. Using plate settlers, new flocculation and sedimentation facilities were incorporated into the existing plant site. In addition, the existing filters were retrofitted with granular activated carbon to improve taste and odor. The new plant addition was online in 2000 with a treatment capacity of 28 MGD. The treatment capacity was lowered due to reduced water demand. The reduced water demand was due to required metering of residential property at the time the property changed hands.

**Water Demand**

Based on the City’s billing system, average water use for the last five years is:

- **Total:** 171 Gallons Per Capita Per Day (GPCD) system-wide
- **Residential:** 89 GPCD for single- and multi-family homes
In 1987, the Englewood City Council passed an ordinance requiring the installation of water meters (and switching to consumption-based rate) at properties receiving flat rates, upon transfer of ownership. An average of 220 meters have been installed annually for the past 25 years, and an associated 30 percent reduction in water use has taken place. By the end of 2011, Englewood was serving 10,670 taps including 8,596 variable rate customers (metered taps) and 2,074 fixed rate customers (non-metered taps). The tap categories include the following:

- Single-Family
- Multi-Family
  - Includes Mobile Home Parks
- Commercial
  - Includes Schools
- Industrial
- Municipal
- Non-Metered Taps

Each of the customer categories are shown in Figure 2.3 below with the coinciding percentage of total taps (metered and non-metered).

The water use distribution for the same customer categories looks a little different than the tap distribution and is shown below in Figure 2.4. While Single-Family water users consist of 80 percent of the taps, they only contribute 43 percent of the water use. Conversely, while Industrial and Commercial taps only consist of ten percent of the taps, they contribute 31 percent of the water use. This is helpful to consider when selecting conservation measures to target certain categories.
Figure 2.3 – Percentage of Taps per Customer Category

2011 Total Taps

- Single Family: 80.71%
- Multi-Family: 8.96%
- Commercial: 10.17%
- Industrial: 0.13%
- Municipal: 0.02%

Figure 2.4 – Percentage of Water Use per Category

2011 Water Use (metered customers)

- Single Family: 43.1%
- Multi-Family: 25.6%
- Commercial: 19.7%
- Industrial: 11.3%
- Municipal: 0.3%
The following table shows Englewood’s overall production for each of the past ten years.

**Table 2.2 - Annual Water Delivered (Overall Production) & Associated Precip.**

<table>
<thead>
<tr>
<th>YEAR</th>
<th>Annual Water Delivery (MG)</th>
<th>Annual Water Delivery (AF)</th>
<th>Precipitation (Inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>2,920.65</td>
<td>8,963</td>
<td>5.96</td>
</tr>
<tr>
<td>2003</td>
<td>2,647.29</td>
<td>8,124</td>
<td>13.92</td>
</tr>
<tr>
<td>2004</td>
<td>2,273.17</td>
<td>6,976</td>
<td>18.47</td>
</tr>
<tr>
<td>2005</td>
<td>2,559.70</td>
<td>7,855</td>
<td>13.54</td>
</tr>
<tr>
<td>2006</td>
<td>2,589.76</td>
<td>7,948</td>
<td>11.19</td>
</tr>
<tr>
<td>2007</td>
<td>2,070.91</td>
<td>6,355</td>
<td>16.33</td>
</tr>
<tr>
<td>2008</td>
<td>2,224.46</td>
<td>6,827</td>
<td>11.15</td>
</tr>
<tr>
<td>2009</td>
<td>1,851.71</td>
<td>5,683</td>
<td>24.7</td>
</tr>
<tr>
<td>2010</td>
<td>2,040.89</td>
<td>6,263</td>
<td>9.9</td>
</tr>
<tr>
<td>2011</td>
<td>1,863.22</td>
<td>5,718</td>
<td>13.4</td>
</tr>
</tbody>
</table>

Notes: MG - Million Gallons, AF - Acre-Feet. Precipitation accounts for rainfall and snowfall

**Table 2.2** and **Figure 2.5** shows steady decline in overall water consumption.

**Figure 2.5 - Annual Water Delivered (Overall Production)**
Sources of Water Supply

The water supplies owned by the City are shown in Table 2.3 along with their firm yield.

Table 2.3 – Firm Source Water Owned by the City of Englewood

<table>
<thead>
<tr>
<th>Water Source</th>
<th>Decreed Amounts - acre-feet/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Consumptive Use</td>
</tr>
<tr>
<td>Nevada Ditch #4</td>
<td>6,078</td>
</tr>
<tr>
<td>Nevada Ditch #19</td>
<td>3,827</td>
</tr>
<tr>
<td>Platte Canyon Ditch #14</td>
<td>724</td>
</tr>
<tr>
<td>Petersburg Ditch #6</td>
<td>927</td>
</tr>
<tr>
<td>Nevada Ditch #4</td>
<td>409</td>
</tr>
<tr>
<td>Nevada Ditch #19</td>
<td>105</td>
</tr>
<tr>
<td>McBroom Ditch #1</td>
<td>227</td>
</tr>
<tr>
<td>Ranch Creek</td>
<td></td>
</tr>
<tr>
<td>Boreas Ditch</td>
<td>175</td>
</tr>
<tr>
<td>Brown Ditch #9</td>
<td>41</td>
</tr>
<tr>
<td>Guiraud Ditch #6</td>
<td>85</td>
</tr>
<tr>
<td>City Ditch #1</td>
<td>1,363</td>
</tr>
<tr>
<td>Aurora Delivery Obligation</td>
<td>339</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,296</td>
</tr>
</tbody>
</table>

Water Stored*

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>North Res.</td>
<td>245</td>
</tr>
<tr>
<td>WWRes</td>
<td>43</td>
</tr>
<tr>
<td>McLellan</td>
<td>2,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>2,288</td>
</tr>
</tbody>
</table>

*Amounts show for stored water are not firm yields

During the late forties to mid-fifties, Englewood acquired senior water rights from five ditches, which were then transferred in water court to Englewood's South Platte River intake located at Union Avenue. In addition, Englewood acquired rights on two ditches located on Bear Creek and rights on the City Ditch. The City Ditch rights are the number one priority in the South Platte River Basin. The rights to two transmountain diversion projects were also acquired by the City in the fifties. The first was Boreas Ditch located on the continental divide between Como and Breckenridge, which diverts water from the Blue River drainage basin to the South Park area in the South Platte River Basin. The second transmountain diversion rights which the City acquired were the Ranch Creek/Meadow Creek rights, which were the right to collect, store, and divert Fraser River Basin water through Denver's Moffat Tunnel system.
System Limitations

Along with areas of high water use, system limitations can provide insight into how and where to set water conservation goals. Discussions here will include both current and potential system limitations. Ideally, conservation can help mitigate a portion of the limitations and improve the reliability and efficiency of the system.

Statewide Water Supply Initiative

In 2003, the Colorado General Assembly authorized CWCB to implement the Statewide Water Supply Initiative (SWSI) as a result of growing pressure on water supplies in Colorado and the 2002 drought. The study identified current and future water demands, available water supplies, and existing and planned water supply projects in eight major river basins in the State. SWSI was recently updated to SWSI 2010, which projects demands to 2050 and includes passive water conservation savings. Passive savings includes such things as future development using more efficient water fixtures in their building process.

The City of Englewood is located in the Metro Basin where SWSI 2010 identified a 57 percent gap between water needs and water supplies in the Basin by 2050. Water conservation is one method the SWSI report identified for meeting this gap.

Dry-Year Water Supply

Englewood owns several very senior water rights that divert from the South Platte River at Union Avenue. While these water rights provide the City with an ample supply of water, in dry years, such as 2002 and 2012, the low streamflow in the river, together with the demands for water from other senior rights, may result in the City’s senior river rights not being able to provide the City with all of the water needed.

Unaccounted-for Water Use

There are two types of water losses that occur in water utilities, apparent losses and real losses. Apparent losses are paper losses that can be caused by customer meter inaccuracies, billing system data errors or unauthorized consumptions. Real losses are those that are physically lost within the distribution system, including the water treatment process.

Englewood staff estimates that system losses have averaged nine percent for the last few years. Even though unaccounted-for water loss ratios of less than ten percent are considered good by industry standards, the City desires to reduce those losses to eight percent.

The City does not have any notable limitation beyond the limitations listed above. Because the City was proactive in their infrastructure planning and construction,
Englewood’s water treatment and storage facilities are more than adequate to accommodate their water supplies.

**Water Costs and Pricing**

**Water Fund**

The Englewood Utilities Water Fund accounts for revenues and expenses associated with providing water services to City of Englewood residents. The Water Fund is one of the City’s Enterprise Funds, which account for operations that: (a) are financed and operated in a manner similar to private business enterprises where the intent of the governing body is that the costs of providing goods or services to the general public on a continuing basis be financed or recovered primarily through user charges, or (b) where the City Council has decided that periodic determination of revenue earned, expenses incurred and/or net income is appropriate for capital maintenance, public policy, management controls, accountability or other purposes. The Water and Sewer Board provides guidance and oversees the Water and Sewer Enterprise Funds and related activities.

**Charges for Water Service**

The City of Englewood sets its water and sewer rates based upon cost-of-service principles. Englewood charges only enough to cover the cost of its operations and to maintain a reasonable contingency for emergencies.

All Englewood water and sewer customers are grouped into one of two customer classes (residential or commercial) and by whether they live inside or outside of Englewood. Cost-of-service rates recover costs from each customer class in proportion to the cost of providing the service to each class.

The rates for the Englewood water and sewer service area are approved by the Englewood Water and Sewer Board and the Englewood City Council after a review of the revenue requirements and costs underlying any rate proposal. There is a public comment period (thirty days) prior to the Council’s voting on the proposed rates. New rates become effective thirty days after Council approval.

There are two components to Englewood's metered water rates: a per 1,000 gallons consumption charge, and an administrative charge to cover such things as the cost of meter reading and billing. For residences or businesses with water meters larger than 3/4" there is a minimum charge based on the size of the water meter. All customers are billed on a quarterly basis.
Table 2.4 – City of Englewood 2012 Metered Rates Inside City

<table>
<thead>
<tr>
<th>Quarterly Consumption (per 1,000 gallons)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>First 400,000 gallons</td>
<td>$3.29</td>
</tr>
<tr>
<td>All Consumption over 400,000 gallons</td>
<td>$2.04</td>
</tr>
</tbody>
</table>

Inside City Minimum Charge

<table>
<thead>
<tr>
<th>Meter Size</th>
<th>Total Quarterly Charge</th>
<th>Admin Fee</th>
<th>Minimum Charge</th>
<th>Consumption Included in Minimum (Gallons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/8&quot;</td>
<td>$8.51</td>
<td>$8.51</td>
<td>N/A</td>
<td>None</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>$9.71</td>
<td>$9.71</td>
<td>N/A</td>
<td>None</td>
</tr>
<tr>
<td>1&quot;</td>
<td>$83.10</td>
<td>$10.74</td>
<td>$72.36</td>
<td>22,000</td>
</tr>
<tr>
<td>1 - 1/4&quot;</td>
<td>$104.25</td>
<td>$12.16</td>
<td>$92.09</td>
<td>28,000</td>
</tr>
<tr>
<td>1 - 1/2&quot;</td>
<td>$158.82</td>
<td>$10.81</td>
<td>$148.01</td>
<td>45,000</td>
</tr>
<tr>
<td>2&quot;</td>
<td>$249.66</td>
<td>$12.85</td>
<td>$236.81</td>
<td>72,000</td>
</tr>
<tr>
<td>3&quot;</td>
<td>$461.66</td>
<td>$17.64</td>
<td>$444.02</td>
<td>135,000</td>
</tr>
<tr>
<td>4&quot;</td>
<td>$764.51</td>
<td>$24.48</td>
<td>$740.03</td>
<td>225,000</td>
</tr>
<tr>
<td>6&quot;</td>
<td>$1,457.91</td>
<td>$40.41</td>
<td>$1,417.50</td>
<td>450,000</td>
</tr>
</tbody>
</table>

Note: The minimum charge plus the administrative fee equals the Total Quarterly Charge

Table 2.5 – City of Englewood 2012 Metered Rates Outside City

<table>
<thead>
<tr>
<th>Quarterly Consumption (per 1,000 gallons)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>First 400,000 gallons</td>
<td>$4.61</td>
</tr>
<tr>
<td>All Consumption over 400,000 gallons</td>
<td>$3.29</td>
</tr>
</tbody>
</table>

Outside City Minimum Charge

<table>
<thead>
<tr>
<th>Meter Size</th>
<th>Total Quarterly Charge</th>
<th>Admin Fee</th>
<th>Minimum Charge</th>
<th>Consumption Included in Minimum (Gallons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/8&quot;</td>
<td>$8.58</td>
<td>$8.58</td>
<td>N/A</td>
<td>None</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>$9.22</td>
<td>$9.22</td>
<td>N/A</td>
<td>None</td>
</tr>
<tr>
<td>1&quot;</td>
<td>$112.80</td>
<td>$11.36</td>
<td>$101.44</td>
<td>22,000</td>
</tr>
<tr>
<td>1 - 1/4&quot;</td>
<td>$142.26</td>
<td>$13.15</td>
<td>$129.11</td>
<td>28,000</td>
</tr>
<tr>
<td>1 - 1/2&quot;</td>
<td>$218.12</td>
<td>$10.62</td>
<td>$207.50</td>
<td>45,000</td>
</tr>
<tr>
<td>2&quot;</td>
<td>$344.59</td>
<td>$12.60</td>
<td>$331.99</td>
<td>72,000</td>
</tr>
<tr>
<td>3&quot;</td>
<td>$639.62</td>
<td>$17.14</td>
<td>$622.49</td>
<td>135,000</td>
</tr>
<tr>
<td>4&quot;</td>
<td>$1,057.04</td>
<td>$19.57</td>
<td>$1,037.48</td>
<td>225,000</td>
</tr>
<tr>
<td>6&quot;</td>
<td>$2,049.42</td>
<td>$40.52</td>
<td>$2,008.90</td>
<td>450,000</td>
</tr>
</tbody>
</table>

Note: The minimum charge plus the administrative fee equals the Total Quarterly Charge
Englewood’s water connection fees are based on the size of the tap, or a combination of multi-family residential units and commercial fixture units. The following tables detail the water system connection charges.

**Table 2.6 – Single-Use Water System Connection Charges**

<table>
<thead>
<tr>
<th>Meter Size</th>
<th>Inside City Connection Fee</th>
<th>Outside City Connection Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/8&quot; or 3/4&quot;</td>
<td>$4,360.00</td>
<td>$6,540.00</td>
</tr>
<tr>
<td>1&quot;</td>
<td>$7,270.00</td>
<td>$10,905.00</td>
</tr>
<tr>
<td>1 - 1/2&quot;</td>
<td>$14,500.00</td>
<td>$21,750.00</td>
</tr>
<tr>
<td>2&quot;</td>
<td>$23,300.00</td>
<td>$34,950.00</td>
</tr>
<tr>
<td>3&quot;</td>
<td>$46,500.00</td>
<td>$69,750.00</td>
</tr>
<tr>
<td>4&quot;</td>
<td>$72,700.00</td>
<td>$109,050.00</td>
</tr>
<tr>
<td>6&quot;</td>
<td>$174,400.00</td>
<td>$261,600.00</td>
</tr>
</tbody>
</table>

The multi-family residential water system connection charge is the total of the base fee plus the per-dwelling unit fee. For multi-family water connections, fees shall be the greater of 1) the sum of the multi-family connection fees or 2) the meter sized based connection fee per the Single-Use Water Connection Fee schedule above.

**Table 2.7 – Multi-Family Residential Water System Connection Charges**

<table>
<thead>
<tr>
<th></th>
<th>Inside City</th>
<th>Outside City</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Fee</td>
<td>$2,620.00</td>
<td>$3,930.00</td>
</tr>
<tr>
<td>Dwelling Unit Fees</td>
<td></td>
<td></td>
</tr>
<tr>
<td>First 12 units</td>
<td>$580.00</td>
<td>$870.00</td>
</tr>
<tr>
<td>Next 22 units</td>
<td>$450.00</td>
<td>$675.00</td>
</tr>
<tr>
<td>Over 3 units</td>
<td>$275.00</td>
<td>$412.00</td>
</tr>
</tbody>
</table>

The Water System Connection Charge for Mixed Use Residential and Commercial properties is the combination of the Multi-Family Residential Connection Charge and the Commercial Mixed Use Water Connection Charge.

**Table 2.8 – Commercial Mixed Use Water Connection Charges**

<table>
<thead>
<tr>
<th></th>
<th>Inside City</th>
<th>Outside City</th>
</tr>
</thead>
<tbody>
<tr>
<td>First 125 Fixture Units</td>
<td>$83.00</td>
<td>$124.50</td>
</tr>
<tr>
<td>Next 250 Fixture Units</td>
<td>$35.00</td>
<td>$52.50</td>
</tr>
<tr>
<td>Over 375 Fixture Units</td>
<td>$25.00</td>
<td>$26.00</td>
</tr>
</tbody>
</table>
Policies and Planning Initiatives Affecting Water Use

Municipal Code

Englewood’s municipal code includes an ordinance in which water shall be used only for beneficial purposes and shall never be wasted. The ordinance specifically prohibits water from being wasted by watering public walks, driveways or streets while irrigating adjacent areas.

Current Water Conservation Activities

The City has instituted the following water conservation measures and programs:

- Public Information
- Meter Replacement
  - Englewood Meter Assistance Program (EMAP)
- Leak Detection
- Plumbing Code
- Non-potable and Water Reuse

Public Information

Currently, the City has an annual newsletter called "The Pipeline" that is sent to all its water users. This newsletter is used to inform the citizens of Englewood about various utility issues including water conservation ideas. Additionally, brochures and information regarding water conservation is readily available at City Hall.

Meter Replacement

The City of Englewood is committed in its effort to meter the entire City to provide an accurate measurement and record of water use to aid in the promotion of water conservation. Metering has been used to make customers more aware of how much water they are using and to equitably distribute the costs of the operation and maintenance of the water system. Presently the City has 80 percent of their customers metered.

The metering program is enforced through the City Code which requires the installation of meters in flat rate homes when the property ownership changes. On a weekly basis the City checks records of transactions in the City and if these transactions indicate that the ownership of a flat-rate account has changed the City immediately sends the owner a notice to install a meter. This requirement was adopted in the Code March 1987, and has been successful in converting approximately 220 flat rate to metered water per year, which has resulted in a 50 percent reduction in peak water use.
The City also has an on-going program of meter repair, replacement and recalibration. The meter reading, repair/calibration and meter purchase are approximately two percent of the budget.

**Englewood Meter Assistance Program - Help with switching from flat rate to metered water**

If an Englewood water customer is interested in switching from flat rate to a water meter, the Utilities Department has a program that helps manage the expense of switching called the Englewood Meter Assistance Program (EMAP).

Under the flat rate plan (non-metered customers), small families typically pay for more water than they actually use, especially during the winter months. The EMAP program takes the difference between what customers pay for the flat rate and what customers would pay for the metered rate and uses that money to help pay the cost of installing the water meter.

The cost of the meter, yoke and installation is about $500. The yoke is designed to be easy for a homeowner to install, but the Utilities Department will include the cost of a plumber to complete installation in the EMAP program. Details are included in Figure 2.6 below.

**Leak Repair & Maintenance**

The City of Englewood is making a large effort to reduce the amount of leakage to zero. The City has funded the upgrading and replacement of older deteriorated water mains. This is possible through a capital improvement program, which during the next ten years is expected to spend $500,000 on water system upgrades.

1. The City water department performs leak surveys which include pressure drops, surface water complaints and investigation of dirty water complaints.

2. The City’s maintenance crews respond as soon as possible to a report of actual or detected leaks. They assess each situation individually by making the appropriate shutoff to isolate the leak and reduce the volume of lost water.

The City has adopted a systematic repair and replacement program to upgrade its water system and avoid leaks.
Plumbing Code

The City of Englewood's Plumbing Code requires water-saving devices for all new construction. These water-conserving devices include maximum 1.6 gallon-per-flush toilets, 2.5 gallons-per-minute (gpm) faucets and 2.5 gpm showerheads.
**Water Reuse and Non-potable Systems**

At the present time, the only reusable or fully consumable water rights that Englewood owns are the consumptive use entitlements decreed for the changes of Englewood’s interests in the Nevada Ditch, the McBroom Ditch and the Brown Ditch, as well as the Aurora Delivery Obligation and Boreas No. 2 Ditch. However, because Englewood’s practice has been to lease these fully reusable entitlements to Centennial Water and Sanitation District, there has been little opportunity for Englewood’s actual reuse of these sources. Currently, 100 percent of the backwash at the City water treatment plant is recycled back into the treatment process. The City uses the non-potable water released from the plant for irrigating the turf around the treatment plant.

The City does, however, provide water from the senior, 1860 City Ditch water right which is used to irrigate the Cherry Hills Country Club in Cherry Hills Village and several small customers along the ditch.
CHAPTER 3 - WATER USE AND DEMAND FORECAST

Use by Customer Category

In 2011, Englewood’s total water production for both metered and non-metered customers was estimated to be 5,606 acre-feet. Non-metered water use was estimated based on the total water production, the known water use for metered customers and the nine percent system loss estimate provided by Englewood staff. Table 3.1 summarizes water use per customer category from 2005 through 2011.

Table 3.1 – City of Englewood Water Use

<table>
<thead>
<tr>
<th>Year</th>
<th>Single Family</th>
<th>Multi-Family</th>
<th>Commercial</th>
<th>Industrial</th>
<th>Municipal</th>
<th>Total Metered Water Use</th>
<th>Estimated Water Use of Non-Metered Customers</th>
<th>Total Water Use</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>acre-feet</td>
<td>acre-feet</td>
<td>acre-feet</td>
<td>acre-feet</td>
<td>acre-feet</td>
<td>acre-feet</td>
<td>acre-feet</td>
<td>acre-feet</td>
</tr>
<tr>
<td>2005</td>
<td>1,832</td>
<td>994</td>
<td>1,307</td>
<td>420</td>
<td>62</td>
<td>4,615</td>
<td>2,949</td>
<td>7,564</td>
</tr>
<tr>
<td>2006</td>
<td>2,162</td>
<td>1,149</td>
<td>1,314</td>
<td>547</td>
<td>27</td>
<td>5,199</td>
<td>2,502</td>
<td>7,700</td>
</tr>
<tr>
<td>2007</td>
<td>1,921</td>
<td>1,178</td>
<td>966</td>
<td>545</td>
<td>21</td>
<td>4,630</td>
<td>1,570</td>
<td>6,200</td>
</tr>
<tr>
<td>2008</td>
<td>2,233</td>
<td>1,058</td>
<td>1,051</td>
<td>419</td>
<td>0</td>
<td>4,761</td>
<td>1,880</td>
<td>6,641</td>
</tr>
<tr>
<td>2009</td>
<td>1,703</td>
<td>1,419</td>
<td>884</td>
<td>434</td>
<td>14</td>
<td>4,454</td>
<td>1,118</td>
<td>5,572</td>
</tr>
<tr>
<td>2010</td>
<td>1,971</td>
<td>1,176</td>
<td>867</td>
<td>473</td>
<td>20</td>
<td>4,507</td>
<td>1,598</td>
<td>6,105</td>
</tr>
<tr>
<td>2011</td>
<td>1,928</td>
<td>1,147</td>
<td>882</td>
<td>505</td>
<td>14</td>
<td>4,477</td>
<td>1,129</td>
<td>5,606</td>
</tr>
<tr>
<td>Average</td>
<td>1,964</td>
<td>1,160</td>
<td>1,039</td>
<td>478</td>
<td>23</td>
<td>4,663</td>
<td>1,821</td>
<td>6,484</td>
</tr>
</tbody>
</table>

Notes:
Non-metered water use is estimated by subtracting the total metered water use from the total overall water production, less 9% for system losses.

Taps and Water Use Summary

The total number of metered and non-metered taps per customer category is shown in Table 3.2 through Table 3.4.

Table 3.5 shows the estimated metered water use per tap for each customer category from 2005 through 2011.
### Table 3.2 – City of Englewood Metered Taps by Customer Category

<table>
<thead>
<tr>
<th>Year</th>
<th>Single Family taps</th>
<th>Multi-Family taps</th>
<th>Commercial taps</th>
<th>Industrial taps</th>
<th>Municipal taps</th>
<th>Total Variable Rate Taps</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>5,308</td>
<td>650</td>
<td>959</td>
<td>13</td>
<td>7</td>
<td>6,937</td>
</tr>
<tr>
<td>2006</td>
<td>5,989</td>
<td>740</td>
<td>1,022</td>
<td>12</td>
<td>3</td>
<td>7,765</td>
</tr>
<tr>
<td>2007</td>
<td>6,088</td>
<td>748</td>
<td>1,017</td>
<td>12</td>
<td>3</td>
<td>7,867</td>
</tr>
<tr>
<td>2008</td>
<td>6,221</td>
<td>759</td>
<td>1,013</td>
<td>12</td>
<td>3</td>
<td>8,008</td>
</tr>
<tr>
<td>2009</td>
<td>6,336</td>
<td>766</td>
<td>1,013</td>
<td>12</td>
<td>3</td>
<td>8,129</td>
</tr>
<tr>
<td>2010</td>
<td>6,572</td>
<td>792</td>
<td>1,063</td>
<td>13</td>
<td>3</td>
<td>8,442</td>
</tr>
<tr>
<td>2011</td>
<td>6,715</td>
<td>788</td>
<td>1,078</td>
<td>12</td>
<td>3</td>
<td>8,596</td>
</tr>
</tbody>
</table>

### Table 3.3 – City of Englewood Non-Metered Taps by Customer Category

<table>
<thead>
<tr>
<th>Year</th>
<th>Single Family taps</th>
<th>Multi-Family taps</th>
<th>Commercial taps</th>
<th>Industrial taps</th>
<th>Municipal taps</th>
<th>Total Fixed Rate Taps</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>2,601</td>
<td>225</td>
<td>8</td>
<td>2</td>
<td>0</td>
<td>2,836</td>
</tr>
<tr>
<td>2006</td>
<td>2,362</td>
<td>201</td>
<td>8</td>
<td>2</td>
<td>0</td>
<td>2,573</td>
</tr>
<tr>
<td>2007</td>
<td>2,249</td>
<td>188</td>
<td>8</td>
<td>2</td>
<td>0</td>
<td>2,447</td>
</tr>
<tr>
<td>2008</td>
<td>2,146</td>
<td>177</td>
<td>7</td>
<td>2</td>
<td>0</td>
<td>2,332</td>
</tr>
<tr>
<td>2009</td>
<td>2,047</td>
<td>175</td>
<td>7</td>
<td>2</td>
<td>0</td>
<td>2,231</td>
</tr>
<tr>
<td>2010</td>
<td>1,983</td>
<td>169</td>
<td>7</td>
<td>2</td>
<td>0</td>
<td>2,161</td>
</tr>
<tr>
<td>2011</td>
<td>1,897</td>
<td>168</td>
<td>7</td>
<td>2</td>
<td>0</td>
<td>2,074</td>
</tr>
</tbody>
</table>

### Table 3.4 – City of Englewood Total Taps by Customer Category

<table>
<thead>
<tr>
<th>Year</th>
<th>Single Family taps</th>
<th>Multi-Family taps</th>
<th>Commercial taps</th>
<th>Industrial taps</th>
<th>Municipal taps</th>
<th>Total Taps</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>7,909</td>
<td>875</td>
<td>967</td>
<td>15</td>
<td>7</td>
<td>9,773</td>
</tr>
<tr>
<td>2006</td>
<td>8,351</td>
<td>941</td>
<td>1,030</td>
<td>14</td>
<td>3</td>
<td>10,338</td>
</tr>
<tr>
<td>2007</td>
<td>8,337</td>
<td>936</td>
<td>1,025</td>
<td>14</td>
<td>3</td>
<td>10,314</td>
</tr>
<tr>
<td>2008</td>
<td>8,367</td>
<td>936</td>
<td>1,020</td>
<td>14</td>
<td>3</td>
<td>10,340</td>
</tr>
<tr>
<td>2009</td>
<td>8,383</td>
<td>941</td>
<td>1,020</td>
<td>14</td>
<td>3</td>
<td>10,360</td>
</tr>
<tr>
<td>2010</td>
<td>8,555</td>
<td>961</td>
<td>1,070</td>
<td>15</td>
<td>3</td>
<td>10,603</td>
</tr>
<tr>
<td>2011</td>
<td>8,612</td>
<td>956</td>
<td>1,085</td>
<td>14</td>
<td>3</td>
<td>10,670</td>
</tr>
</tbody>
</table>
Table 3.5 – City of Englewood Water Use per Tap (metered customers)

<table>
<thead>
<tr>
<th>Year</th>
<th>Single Family acre-feet/tap</th>
<th>Multi-Family acre-feet/tap</th>
<th>Commercial acre-feet/tap</th>
<th>Industrial acre-feet/tap</th>
<th>Municipal acre-feet/tap</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>0.23</td>
<td>1.14</td>
<td>1.35</td>
<td>28.02</td>
<td>9.20</td>
</tr>
<tr>
<td>2006</td>
<td>0.26</td>
<td>1.22</td>
<td>1.28</td>
<td>39.08</td>
<td>10.63</td>
</tr>
<tr>
<td>2007</td>
<td>0.23</td>
<td>1.26</td>
<td>0.94</td>
<td>38.95</td>
<td>7.58</td>
</tr>
<tr>
<td>2008</td>
<td>0.27</td>
<td>1.13</td>
<td>1.03</td>
<td>29.95</td>
<td>0.00</td>
</tr>
<tr>
<td>2009</td>
<td>0.20</td>
<td>1.51</td>
<td>0.87</td>
<td>30.98</td>
<td>5.43</td>
</tr>
<tr>
<td>2010</td>
<td>0.23</td>
<td>1.22</td>
<td>0.81</td>
<td>31.55</td>
<td>8.05</td>
</tr>
<tr>
<td>2011</td>
<td>0.22</td>
<td>1.20</td>
<td>0.81</td>
<td>36.09</td>
<td>5.75</td>
</tr>
<tr>
<td>Average</td>
<td>0.24</td>
<td>1.24</td>
<td>1.01</td>
<td>33.52</td>
<td>6.66</td>
</tr>
</tbody>
</table>

Per Capita Water Use

Per capita water use, both system-wide and residential only, is a commonly used way to gage an entity’s water use habits. System-wide per capita use can vary significantly between entities depending on the type of non-residential customers within the system.

Englewood averages 171 GPCD system-wide with an estimated 89 GPCD for residential uses from 2007 to 2011 as shown in Table 3.6. Due to lack of specific residential water use and population for non-metered customers, the residential GPCD may be skewed.

Table 3.6 – City of Englewood Per Capita Water Use

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Water Use (Metered and Non-Metered) acre-feet</th>
<th>Metered Residential Water Use (Single and Multi Family) acre-feet</th>
<th>Population</th>
<th>System Wide GPCD</th>
<th>Residential GPCD</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>6,200</td>
<td>3,098</td>
<td>32,191</td>
<td>172</td>
<td>86</td>
</tr>
<tr>
<td>2008</td>
<td>6,641</td>
<td>3,291</td>
<td>32,191</td>
<td>184</td>
<td>91</td>
</tr>
<tr>
<td>2009</td>
<td>5,572</td>
<td>3,123</td>
<td>32,191</td>
<td>155</td>
<td>87</td>
</tr>
<tr>
<td>2010</td>
<td>6,105</td>
<td>3,147</td>
<td>30,255</td>
<td>180</td>
<td>93</td>
</tr>
<tr>
<td>2011</td>
<td>5,606</td>
<td>3,075</td>
<td>30,255</td>
<td>165</td>
<td>91</td>
</tr>
<tr>
<td>Average</td>
<td>6,025</td>
<td>3,147</td>
<td>31,417</td>
<td>171</td>
<td>89</td>
</tr>
</tbody>
</table>
**Indoor vs. Outdoor Use**

In Colorado, a significant portion of water use typically occurs outdoors for irrigation. To determine Englewood’s average outdoor use, we assumed the average residential unit would use 50 percent of their water for outdoor irrigation\(^1\).

**Demand Forecast**

The majority of Englewood’s land area was developed during the post World War II era, between 1945 and 1960. As is evident by the population data presented in Table 2.1, Englewood’s population growth is limited and not expected to increase during the planning period. Therefore, average water use (See Table 3.1) and average water use per tap figures (See Table 3.5) for the period of 2005 – 2011 are used to forecast future water use.

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\(^1\) According to Denver Water data
CHAPTER 4 - WATER CONSERVATION GOALS

Goal Development Process

The development of water-savings goals for Englewood was a collaborative process involving Clear Water Solutions and City staff. Information was gathered from billing records and existing planning documents to properly characterize the system, resources and water use. Development of this data showed the City’s largest water use customer categories, seasonal usage, system limitations and losses, and outlined the City’s existing conservation efforts and their estimated effectiveness.

We met with staff to discuss water-savings goals and the potential methods to reach those goals. Initial reduction percentages were established and a universal list of measures and programs were compiled for consideration. The goals focused on the water use areas that could be successfully impacted considering factors such as water savings potential, costs, control, and public acceptance.

Water Conservation Goals

Establishing water conservation goals is an iterative process that begins with quantifying the future demand for water based on current water-use habits and identifying areas water use can feasibly and effectively be reduced. Englewood, according to the Planning Department’s projection, is not expected to increase its water demand through new growth. However, the City would still like to reduce overall demand by ten percent in the next ten years.

Discussions with City staff focused on the desire to continue and expand Englewood’s EMAP. EMAP takes the difference between what the customer pays for the non-metered rate and what the customer would pay for the metered rate and uses that money to help pay the cost of installing the water meter. Participation in EMAP is optional. If provided a grant by the CWCB, Englewood would like to expand upon their current program by providing 50 to 100 meters at no cost to the customer while the customer continues to pay the flat rate charges, as further incentive for meter replacement. If the customer converts, the money received by the City would go to providing a meter for another flat rate customer.

In addition to the EMAP expansion, City staff discussed possibly expanding educational programs that encourage residential category (Single-Family and Multi-Family water users) water conservation and may also impact the Commercial and Industrial customers as well. City staff discussed the desire to explore performing a water rate study, which would ensure that the City has a fair rate structure that could provide incentives for customers to save water.
In setting initial water savings goals for the City, we looked at the current water use per customer category and the limitations of the water supply system. Table 4.1 shows initial goals established for each customer category.

### Table 4.1 – Englewood Water Conservation Goals

<table>
<thead>
<tr>
<th>Water Use Categories:</th>
<th>Total Projected Water Use (2013 to 2022)</th>
<th>Reduction Goals for Planning Horizon</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(AF) (AF) (%)</td>
<td>(%) (AF)</td>
</tr>
<tr>
<td>Single-Family</td>
<td>19,642</td>
<td>5.0% 982</td>
</tr>
<tr>
<td>Multi-Family</td>
<td>11,602</td>
<td>5.0% 580</td>
</tr>
<tr>
<td>Commercial</td>
<td>10,387</td>
<td>2.5% 260</td>
</tr>
<tr>
<td>Industrial</td>
<td>4,778</td>
<td>2.5% 119</td>
</tr>
<tr>
<td>Municipal</td>
<td>225</td>
<td>0.5% 1.13</td>
</tr>
<tr>
<td>Non-Metered Customers - Meter Replacement and EMAP</td>
<td>18,207</td>
<td>15.0% 2,731</td>
</tr>
<tr>
<td>Unaccounted-for Losses (currently 9%)</td>
<td>5,836</td>
<td>8.0% 648</td>
</tr>
<tr>
<td>Total Water Production:</td>
<td>70,677</td>
<td></td>
</tr>
<tr>
<td>Total Demand Reduction:</td>
<td></td>
<td>5,322</td>
</tr>
<tr>
<td>Total Percent Reduction:</td>
<td></td>
<td>8%</td>
</tr>
</tbody>
</table>

**Notes:**
- **Unaccounted-For Loss (UL)** equals loss rate (above = 9%) times estimated projected water use.
- **Reduction Goal for UL** equals the difference between ULs at 9% and the ULs at the reduced rate goal (8.0%).
- **Non-Metered Customers** include **Residential, Commercial and Industrial water users**

### Single-Family and Multi-Family Conservation Goals

The per-capita water use in Englewood is comparable to the average in Colorado. Considering that there are a number of existing measures that can be improved and new measures that can be introduced, the reduction goal was set at five percent for Single-Family and Multi-Family categories.

### Commercial and Industrial Conservation Goals

The Commercial category includes but is not limited to hospitality, restaurants, retail, healthcare, car washes, and schools. Because there are many types of Commercial
and Industrial customers, actual savings are difficult to predict. For now, a goal of 2.5 percent is estimated for the Commercial and Industrial categories.

**Municipal Conservation Goals**

Englewood tracks water use in and surrounding City-owned properties. We estimate that a 0.5 percent savings can be achieved through water conservation measures targeting this category.

**Non-Metered Customer Conservation Goals**

Eventually, all non-metered customers will be converted to metered customers. We estimate that with the meter replacement and EMAP programs, a 15 percent savings can be achieved through water conservation measures targeting this category.

**Unaccounted-for Losses**

The average loss in the system due to leaks, record keeping errors, theft, or lack of measurement (non-metered customers) is estimated at about nine percent of the water production. The goal for the City is to reduce the system losses by one percent bringing them to eight percent.
CHAPTER 5 – CONSERVATION MEASURES AND PROGRAMS

Water Conservation Measures and Programs

We developed a universal list of conservation measures and programs. The measures and programs were placed into five major categories: Utility Maintenance Programs, Regulatory Controls and Standards, Educational Programs, Rebates and Incentive Programs, and Audit Programs. The universal list is shown in Table 5.1 with existing measures highlighted in green.

Screening Criteria

The following screening criteria were compiled based on discussions with staff. The criteria were chosen as a general screening to pare down the universal list to a list of measures and programs to evaluate further, including reviewing costs to implement, expected water savings, and loss of revenue from the water savings. Each measure and program in Table 5.1 was screened with the following criteria.

1. Staff Time
2. Financial implications
3. Political ramifications

Screening of Conservation Measures and Programs

The purpose of the initial screening was to create a list of measures and programs that would be evaluated further in the planning process via a cost-benefit analysis. A meeting was held with City staff and Water Board to discuss each measure/program on the universal list and eliminate ones that were not feasible using the established screening criteria.

The list of measures was also evaluated to determine if the CWCB Minimum Required Water Conservation Plan Elements were addressed. The required CWCB elements include:

- Water-efficient fixtures and appliances, including toilets, showerheads, and faucets
- Low water use landscapes, drought resistant vegetation, removal of phreatophytes (a deep rooted plant that obtains water from the water table or the layer of soil just above it. Includes cottonwoods, tamarisk, etc.), and efficient irrigation
- Water-efficient industrial and commercial water use processes
- Water reuse systems
- Distribution system leak identification and repair
- Dissemination of information regarding water use efficiency measures, including by public education, customer water use audits, and water-saving demonstrations
- Water rate structures and billing systems designed to encourage water use efficiency in a fiscally responsible manner
- Regulatory measures designed to encourage water conservation
- Incentives to implement water conservation techniques, including rebates to customers

The screening was completed on October 31, 2012 and November 13, 2012. The resulting decisions are noted on Table 5.1.

Table 5.1 – Universal List of Conservation Measures and Programs

<table>
<thead>
<tr>
<th>Conservation Measure or Program</th>
<th>Existing</th>
<th>Further Evaluation</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Utility Maintenance Programs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Meter Conversion Program</td>
<td>Yes</td>
<td>Yes</td>
<td>The City would like to continue the current program</td>
</tr>
<tr>
<td>Englewood Meter Assistance Program</td>
<td>Yes</td>
<td>Yes</td>
<td>Englewood would like to expand this program</td>
</tr>
<tr>
<td>Meter Testing and Replacement Program</td>
<td>Yes</td>
<td>No</td>
<td>When they have an issue with a bill, then they check and replace meter</td>
</tr>
<tr>
<td>Sub-Meter Mobile Home Parks</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Require sub-metering in new multi-family housing</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Installing Meters in the Distribution System</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Leak Detection &amp; Repair Program</td>
<td>No</td>
<td>Yes</td>
<td>Rely on a local company to complete</td>
</tr>
<tr>
<td>Leak Detection for Master Meter Communities</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Leak Detection in Mobile Home Parks</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Billing Software Upgrades</td>
<td>Yes</td>
<td>Yes</td>
<td>Just upgraded - will upgrade every 3 to 5 years</td>
</tr>
<tr>
<td>Water provider facility fixture upgrades (indoor and outdoor)</td>
<td>No</td>
<td>No</td>
<td>Already have newer efficient fixtures in City facilities</td>
</tr>
<tr>
<td>Recycling WTP Filter Backwash</td>
<td>Yes</td>
<td>Yes</td>
<td>Englewood recycles 100% of the backwash water</td>
</tr>
<tr>
<td>Water Reuse System</td>
<td>Yes</td>
<td>Yes</td>
<td>See Recycling WTP Filter Backwash</td>
</tr>
<tr>
<td>Conservation Measure or Program</td>
<td>Existing</td>
<td>Further Evaluation</td>
<td>Comment</td>
</tr>
<tr>
<td>---------------------------------------------------------------------</td>
<td>----------</td>
<td>--------------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Regulatory Controls and Standards</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Waste Ordinance</td>
<td>Yes</td>
<td>Yes</td>
<td>The City would like to explore expanding ordinances that prohibit water waste</td>
</tr>
<tr>
<td>Removal of Phreatophytes e.g. Cottonwoods</td>
<td>No</td>
<td>No</td>
<td>City does this but it is not required of the general public</td>
</tr>
<tr>
<td>Drought Mitigation Plan</td>
<td>No</td>
<td>Yes</td>
<td>The City will pursue drought mitigation planning separately from this conservation planning effort.</td>
</tr>
<tr>
<td>Turf and Landscape Restrictions/Standards for New Construction</td>
<td>No</td>
<td>No</td>
<td>Re-evaluate with future planning efforts.</td>
</tr>
<tr>
<td>Irrigation System Requirements/Standards for New Construction</td>
<td>No</td>
<td>No</td>
<td>Re-evaluate with future planning efforts.</td>
</tr>
<tr>
<td>Water Rate Structure Changes</td>
<td>No</td>
<td>Yes</td>
<td>A rate study may be conducted to determine a fair structure that will help maximize water savings.</td>
</tr>
<tr>
<td>General Evaluation of Policies that Encourage Water Savings</td>
<td>No</td>
<td>Yes</td>
<td>City staff would like to evaluate further.</td>
</tr>
<tr>
<td><strong>Educational Programs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Billing Statements that Encourage Water Savings</td>
<td>Yes</td>
<td>Yes</td>
<td>Program to be combine with ET Scheduling in Water Bill.</td>
</tr>
<tr>
<td>Children's Water Festival</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Xeriscape Garden Demonstration</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Xeriscape Gardening Classes</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Xeriscape Program for Commercial</td>
<td>No</td>
<td>No</td>
<td>Refer to Denver Water’s Xeriscape Programs</td>
</tr>
<tr>
<td>Xeriscape Program for Open Space (HOAs)</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>School Education Program (K-12 Education)</td>
<td>No</td>
<td>Yes</td>
<td>Each year, Englewood hosts school children at the water treatment plant for water day.</td>
</tr>
<tr>
<td>Post BMPs on Website or as Bill Stuffers</td>
<td>No</td>
<td>Yes</td>
<td>Combined with Public Education -Bill Stuffers &amp; Website Measure below</td>
</tr>
<tr>
<td>Online Access to Water Bill and History</td>
<td>No</td>
<td>Yes</td>
<td>Beginning in 2013, Englewood water customers will be able to access the water bill online</td>
</tr>
<tr>
<td>Educational Kits</td>
<td>No</td>
<td>Yes</td>
<td>Will evaluate further</td>
</tr>
<tr>
<td>Property Manager/HOA Education and Training</td>
<td>No</td>
<td>No</td>
<td>Staff limitations.</td>
</tr>
<tr>
<td>Public Education - Bill Stuffers &amp; Website</td>
<td>No</td>
<td>Yes</td>
<td>Combined with BMP Measure above.</td>
</tr>
<tr>
<td>Send ET Irrigation Scheduling in Water Bill</td>
<td>No</td>
<td>Yes</td>
<td>Combined with Billing Statement Measure above.</td>
</tr>
<tr>
<td>Conservation Measure or Program</td>
<td>Existing</td>
<td>Further Evaluation</td>
<td>Comment</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------------------------------</td>
<td>----------</td>
<td>--------------------</td>
<td>----------------------------------------------</td>
</tr>
<tr>
<td>Rebates and Incentive Programs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distribute Pre-rinse Spray Heads to Restaurants &amp; Institutions</td>
<td>No</td>
<td>No</td>
<td>Staff limitations</td>
</tr>
<tr>
<td>Rebate Programs for Toilets, Clothes Washers, Dishwashers, Faucets and Showerheads</td>
<td>No</td>
<td>No</td>
<td>Staff limitations</td>
</tr>
<tr>
<td>Rebates for ET (SMART) Sprinkler System Controllers</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Zero Interest Loans for Washers</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Water Conservation Upgrades for City Facilities- Outdoor</td>
<td>No</td>
<td>No</td>
<td>Re-evaluate with future planning efforts.</td>
</tr>
<tr>
<td>Water Conservation Upgrades for City Facilities- Indoor</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Xeriscape Incentives for all customer categories</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Irrigation System Efficiency Device Rebates</td>
<td>No</td>
<td>No</td>
<td>Re-evaluate with future planning efforts.</td>
</tr>
<tr>
<td>Wind and/or Rain Sensor Rebates for Residential or Commercial</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Low Income Retrofit Program</td>
<td>No</td>
<td>No</td>
<td>Re-evaluate with future planning efforts.</td>
</tr>
<tr>
<td>Commercial Water Audits</td>
<td>No</td>
<td>Yes</td>
<td>City staff would like to evaluate further.</td>
</tr>
<tr>
<td>Residential Audit Kit</td>
<td>No</td>
<td>Yes</td>
<td>City staff would like to evaluate further.</td>
</tr>
<tr>
<td>Sprinkler System Audit Kit and Instructions</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Irrigation Audit of City Parks and Properties</td>
<td>No</td>
<td>No</td>
<td>Re-evaluate with future planning efforts.</td>
</tr>
</tbody>
</table>

* Shaded cells represent existing measures.
The initial screening of the measures and programs with City staff resulted in selecting 15 measures for further evaluation. Englewood would like to evaluate many of the eliminated measures with future planning efforts. Some of the measures have been combined as noted in Table 5.1. The benefits and costs of the selected measures and programs are shown in Table 6.1. The grouping of the measures enabled us to consider like measures and avoid double counting savings. Details about the cost-benefit evaluation and information about each measure can be found in Appendix A.

**Costs and Water Savings of Conservation Options**

Prior to evaluating the potential cost effectiveness of the measures/programs, it is important to understand the magnitude of typical indoor and outdoor uses and the contribution of each to total demand. There is a wide range of use related to each indoor and outdoor measure that can affect the potential water savings and cost effectiveness accordingly. The assumptions for calculating water savings used for this analysis were on the conservative end of the ranges found in the available water conservation research to avoid overestimating savings.

Many resources were used to estimate water savings including Amy Vickers Handbook of Water Use and Conservation, studies and papers from California and Arizona, local studies available from the American Water Resources Association, the Environmental Protection Agency, Western Resource Advocates, information from other Colorado municipalities, and the CWCB website.

**Table 6.1** provides a cost-benefit analysis for all of the measures and programs previously identified to be evaluated further. A planning horizon of ten years is used to quantify the full benefit of these measures and programs. The costs and water savings over the planning period are calculated assuming the measures/programs all start in Year One. This provides an equitable ranking of the measures, so they can be compared on an apples-to-apples basis. In reality, the measures and programs will be implemented according to the implementation schedule developed in Chapters 7 and 8.

The first four columns (Columns A-D) of **Table 6.1** identify the conservation measure or program and quantify the costs to the City. These costs include annual costs for materials, staff time, and one-time start up costs. The table then quantifies water savings annually and for the entire ten-year planning horizon. Annual water savings and projected lost revenue are based on full
implementation. This gives the City an idea of the anticipated water savings and estimated revenue impacts after full implementation.

The cost per 1,000 gallons of water saved is found by dividing the total cost by the total water savings for the entire ten-year period. The measures and programs are then ranked by cost per 1,000 gallons saved. This ranking helps to determine which measures will be more effective and to suggest a useful order of implementation.
### Table 6.1 – Cost/Savings Analysis of Conservation Measures and Programs

<table>
<thead>
<tr>
<th>Conservation Measure or Program</th>
<th>Total Cost to Water Provider</th>
<th># of Participants per Year</th>
<th>Estimated Annual Water Savings (MG)</th>
<th>Estimated Total Water Savings over Planning Period (MG)</th>
<th>Annual Revenue Loss Related to Water Savings</th>
<th>Annual Cost</th>
<th>Estimated Total Cost over Planning Period including Set-up</th>
<th>Cost per 1000 Gallons Saved</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Supply side measures &amp; programs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utility Maintenance Programs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Meter Replacement Program</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>50</td>
<td>5.1</td>
<td>278.9</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Englewood Meter Assistance Program (EMAP)</td>
<td>$0</td>
<td>$0</td>
<td>$50,000</td>
<td>100</td>
<td>10.1</td>
<td>557.8</td>
<td>$0</td>
<td>$50,000</td>
<td>$500,000</td>
</tr>
<tr>
<td>Billing Software Upgrades</td>
<td>$110,000</td>
<td>$0</td>
<td>$11,000</td>
<td>0</td>
<td>5.8</td>
<td>28.8</td>
<td>$0</td>
<td>$308,000</td>
<td>$308,000</td>
</tr>
<tr>
<td>Recycling WTP Filter Backwash</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>23.0</td>
<td>230.3</td>
<td>$0</td>
<td>$109,362</td>
<td>$218,724</td>
<td>$0.95</td>
</tr>
<tr>
<td>Leak Detection &amp; Repair</td>
<td>$0</td>
<td>$109,362</td>
<td>$0</td>
<td>23.0</td>
<td>230.3</td>
<td>$0</td>
<td>$109,362</td>
<td>$218,724</td>
<td>$0.95</td>
</tr>
<tr>
<td><strong>Regulatory Controls and Standards</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Evaluation of Policies that Encourage Water Savings</td>
<td>$750</td>
<td>$0</td>
<td>$0</td>
<td>0</td>
<td>0.037</td>
<td>0.37</td>
<td>$0</td>
<td>$0</td>
<td>$750</td>
</tr>
<tr>
<td>Water Waste Ordinance</td>
<td>$500</td>
<td>$0</td>
<td>$0</td>
<td>0</td>
<td>5.3</td>
<td>52.6</td>
<td>$17,318</td>
<td>$17,318</td>
<td>$173,678</td>
</tr>
<tr>
<td><strong>Educational Programs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School Education Program (K-12 Education)</td>
<td>$0</td>
<td>$800</td>
<td>$500</td>
<td>4.1</td>
<td>41.5</td>
<td>$13,638</td>
<td>$14,938</td>
<td>$149,382</td>
<td>$3.60</td>
</tr>
<tr>
<td>Educational Kits</td>
<td>$59,900</td>
<td>$0</td>
<td>$0</td>
<td>0</td>
<td>3.2</td>
<td>175.6</td>
<td>$21,497</td>
<td>$21,497</td>
<td>$274,873</td>
</tr>
<tr>
<td>Public Education - Newsletter, Bill Stuffers, Website</td>
<td>$0</td>
<td>$2,000</td>
<td>$7,757</td>
<td>10,342</td>
<td>13.6</td>
<td>135.7</td>
<td>$44,630</td>
<td>$54,387</td>
<td>$543,869</td>
</tr>
<tr>
<td>Online Access to Water Bill and History</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>0</td>
<td>15.1</td>
<td>151.2</td>
<td>$49,752</td>
<td>$49,752</td>
<td>$497,523</td>
</tr>
<tr>
<td>Distribute ET Irrigation Scheduling in Water Bill</td>
<td>$0</td>
<td>$400</td>
<td>$7,757</td>
<td>10,342</td>
<td>6.8</td>
<td>67.8</td>
<td>$22,315</td>
<td>$30,472</td>
<td>$304,717</td>
</tr>
<tr>
<td><strong>Rebate and Incentive Programs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial &amp; Industrial water audits</td>
<td>$0</td>
<td>$400</td>
<td>$10,500</td>
<td>21</td>
<td>1.8</td>
<td>96.3</td>
<td>$12,181</td>
<td>$23,081</td>
<td>$230,812</td>
</tr>
<tr>
<td>Residential water audits</td>
<td>$0</td>
<td>$1,000</td>
<td>$0</td>
<td>186</td>
<td>2.7</td>
<td>148.0</td>
<td>$1,447</td>
<td>$2,447</td>
<td>$24,468</td>
</tr>
</tbody>
</table>

**Column Explanations:**

(A) Name of conservation measure or program
(B) One time labor and material costs involved in set up program or measure
(C) Labor involved each year for operation of measure or program
(D) Materials needed each year for each unit or if listed or for the whole measure or program
(E) Number of participants expected to participate and resulting units or audits needed
(F) Total water savings seen in a year from the measure or program (in million gallons MG)
(G) Total water savings seen over entire ten year planning period; could be based on increasing water demand or a fixed use per account (in MG)
(H) Revenue the water provider will not be paid if the water savings occur.
(I) Total annual cost to water provider plus the annual revenue loss.
(J) Total cost to implement and operate measure or program over entire planning period, including annual operation, one time set up costs
(K) and annual revenue lost due to water savings
(L) Cost per 1000 gallons saved = total cost over planning period divided by total water saved over planning period

Ranks the measures and programs according to the price per 1000 gallons of water saved, lowest to highest

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City of Englewood

2013 Water Conservation Plan
Comparison of Benefits and Costs

The resulting rank of measures by cost-benefit is shown in Table 6.2 below. The cost per 1,000 gallons saved ranges from $0.00 to $10.70. The measures are ranked fairly evenly throughout the five categories. For the $0.00 per 1,000 gallon saved measures, we did not consider the costs to the City, as the City will continue these measures regardless of cost.

The rankings are a result of the ratio of cost, including lost revenue, to water savings. For instance, billing software upgrades help Englewood save a fair amount of water. However, the cost relative to the water savings is high, so it ranks lower than one might expect. This is only a cost per water saved ranking. There are other factors to consider, which will be accomplished in a second screening.

Table 6.2 – Cost-Benefit Ranking

<table>
<thead>
<tr>
<th>Rank</th>
<th>Conservation Measures and Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Water Meter Replacement Program</td>
</tr>
<tr>
<td>2</td>
<td>Recycling WTP Filter Backwash</td>
</tr>
<tr>
<td>3</td>
<td>Residential water audits</td>
</tr>
<tr>
<td>4</td>
<td>Englewood Meter Assistance Program (EMAP)</td>
</tr>
<tr>
<td>5</td>
<td>Leak Detection &amp; Repair</td>
</tr>
<tr>
<td>6</td>
<td>Educational Kits</td>
</tr>
<tr>
<td>7</td>
<td>General Evaluation of Policies that Encourage Water Savings</td>
</tr>
<tr>
<td>8</td>
<td>Commercial &amp; Industrial water audits</td>
</tr>
<tr>
<td>9</td>
<td>Online Access to Water Bill and History</td>
</tr>
<tr>
<td>10</td>
<td>Water Waste Ordinance</td>
</tr>
<tr>
<td>11</td>
<td>Water Rates that Encourage Water Savings</td>
</tr>
<tr>
<td>12</td>
<td>School Education Program (K-12 Education)</td>
</tr>
<tr>
<td>13</td>
<td>Public Education - Newsletter, Bill Stuffers, Website</td>
</tr>
<tr>
<td>14</td>
<td>Distribute ET Irrigation Scheduling in Water Bill</td>
</tr>
<tr>
<td>15</td>
<td>Billing Software Upgrades</td>
</tr>
</tbody>
</table>

Evaluation Criteria

After each of the conservation measures and programs were ranked by cost per 1,000 gallons saved, as shown in Table 6.2, the next step was to select conservation measures and programs for implementation. The criteria used for selection are as follows:

1. Staff Time
2. Financial implications
3. Political ramifications
Selected Conservation Measures and Programs

The second screening was accomplished by evaluating each measure/program based on the screening criteria and Englewood’s overall goal for this Water Conservation Plan. As mentioned previously, further detail on the conservation measures and programs chosen in the final selection are found in Appendix A.

Even though the EMAP measure was not the highest ranked measure in the cost-benefit analysis, Englewood would like to make this program a top priority. The City would like to expand upon their current program by providing 50 to 100 meters, at no cost to the customer, as further incentive for meter replacement. The City hopes to significantly increase the meter conversion rate for their non-metered customers.

In Chapter 4, conservation goals were established for eight customer categories:

- Single-Family: 5% - 982 AF
- Multi-Family: 5% - 580 AF
- Commercial: 2.5% - 260 AF
- Industrial: 2.5% - 119 AF
- Municipal: 0.5% - 1.13 AF
- Non-Metered Customers: 15% - 2,731 AF
- Unaccounted-for Losses: 8% - 648 AF (of savings)

The selected conservation measures/programs and associated water savings were arranged within the targeted customer categories to more easily compare the anticipated savings to the original goals. Some of the measures contribute savings to more than one category. Table 6.3 shows the water savings for the selected measures, sub-totaled for each category.

Table 6.3 – Combined Water Savings of Selected Conservation Measures and Programs

<table>
<thead>
<tr>
<th>Conservation Measures and Programs</th>
<th>Estimated Annual Water Savings after full Implementation (MG)</th>
<th>Estimated Total Water Savings over Planning Period (MG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Billing Software Upgrades</td>
<td>5.8</td>
<td>28.8</td>
</tr>
<tr>
<td>Recycling WTP Filter Backwash</td>
<td>23.0</td>
<td>230.3</td>
</tr>
<tr>
<td>Leak Detection &amp; Repair</td>
<td>23.0</td>
<td>230.3</td>
</tr>
<tr>
<td>System Losses</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal - MG</strong></td>
<td><strong>51.8</strong></td>
<td><strong>489.4</strong></td>
</tr>
<tr>
<td>Acre-Feet</td>
<td>159</td>
<td>1,502</td>
</tr>
<tr>
<td>Conservation Measures and Programs</td>
<td>Estimated Annual Water Savings after full Implementation (MG)</td>
<td>Estimated Total Water Savings over Planning Period (MG)</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>-------------------------------------------------------------</td>
<td>--------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Non-Metered Customer - Meter Replacement and EMAP</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Meter Replacement</td>
<td>5.1</td>
<td>278.9</td>
</tr>
<tr>
<td>Englewood Meter Assistance Program (EMAP)</td>
<td>10.1</td>
<td>557.8</td>
</tr>
<tr>
<td>Water Waste Ordinance</td>
<td>1.5</td>
<td>14.8</td>
</tr>
<tr>
<td><strong>Subtotal - MG</strong></td>
<td><strong>16.7</strong></td>
<td><strong>851.5</strong></td>
</tr>
<tr>
<td><strong>Acre-Feet</strong></td>
<td><strong>51</strong></td>
<td><strong>2,613</strong></td>
</tr>
<tr>
<td><strong>Single-Family</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Waste Ordinance</td>
<td>1.6</td>
<td>16.0</td>
</tr>
<tr>
<td>Water Rates that Encourage Water savings</td>
<td>12.8</td>
<td>128.0</td>
</tr>
<tr>
<td>School Education</td>
<td>3.2</td>
<td>32.0</td>
</tr>
<tr>
<td>Educational Kits</td>
<td>3.2</td>
<td>64.5</td>
</tr>
<tr>
<td>Public Education</td>
<td>6.4</td>
<td>64.0</td>
</tr>
<tr>
<td>Online Access to Water Bill and History</td>
<td>6.4</td>
<td>64.0</td>
</tr>
<tr>
<td>Distribute ET Irrigation Scheduling in Water Bill</td>
<td>3.2</td>
<td>32.0</td>
</tr>
<tr>
<td>Residential Water Audits</td>
<td>0.08</td>
<td>24.0</td>
</tr>
<tr>
<td><strong>Subtotal - MG</strong></td>
<td><strong>36.9</strong></td>
<td><strong>424.5</strong></td>
</tr>
<tr>
<td><strong>Acre-Feet</strong></td>
<td><strong>113</strong></td>
<td><strong>1,303</strong></td>
</tr>
<tr>
<td><strong>Multi-Family</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Waste Ordinance</td>
<td>0.9</td>
<td>9.5</td>
</tr>
<tr>
<td>Water Rates that Encourage Water savings</td>
<td>7.6</td>
<td>75.6</td>
</tr>
<tr>
<td>School Education</td>
<td>0.9</td>
<td>9.5</td>
</tr>
<tr>
<td>Educational Kits</td>
<td>2.0</td>
<td>111.1</td>
</tr>
<tr>
<td>Public Education</td>
<td>3.8</td>
<td>37.8</td>
</tr>
<tr>
<td>Online Access to Water Bill and History</td>
<td>3.8</td>
<td>37.8</td>
</tr>
<tr>
<td>Distribute ET Irrigation Scheduling in Water Bill</td>
<td>1.9</td>
<td>18.9</td>
</tr>
<tr>
<td>Residential Water Audits</td>
<td>0.39</td>
<td>124.0</td>
</tr>
<tr>
<td><strong>Subtotal - MG</strong></td>
<td><strong>21.3</strong></td>
<td><strong>424.1</strong></td>
</tr>
<tr>
<td><strong>Acre-Feet</strong></td>
<td><strong>65</strong></td>
<td><strong>1,302</strong></td>
</tr>
<tr>
<td><strong>Commercial</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Waste Ordinance</td>
<td>0.8</td>
<td>8.5</td>
</tr>
<tr>
<td>Water Rates that Encourage Water savings</td>
<td>6.8</td>
<td>67.7</td>
</tr>
<tr>
<td>Public Education</td>
<td>3.4</td>
<td>33.8</td>
</tr>
<tr>
<td>Online Access to Water Bill and History</td>
<td>3.4</td>
<td>33.8</td>
</tr>
<tr>
<td>Distribute ET Irrigation Scheduling in Water Bill</td>
<td>1.7</td>
<td>16.9</td>
</tr>
<tr>
<td>Commercial and Industrial Water Audits</td>
<td>0.7</td>
<td>36.2</td>
</tr>
<tr>
<td><strong>Subtotal - MG</strong></td>
<td><strong>16.7</strong></td>
<td><strong>197.0</strong></td>
</tr>
<tr>
<td><strong>Acre-Feet</strong></td>
<td><strong>51</strong></td>
<td><strong>604</strong></td>
</tr>
<tr>
<td><strong>Industrial</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Waste Ordinance</td>
<td>0.4</td>
<td>3.9</td>
</tr>
<tr>
<td>Water Rates that Encourage Water savings</td>
<td>3.1</td>
<td>31.1</td>
</tr>
<tr>
<td>Online Access to Water Bill and History</td>
<td>1.6</td>
<td>15.6</td>
</tr>
<tr>
<td>Commercial and Industrial Water Audits</td>
<td>1.1</td>
<td>60.1</td>
</tr>
<tr>
<td><strong>Subtotal - MG</strong></td>
<td><strong>6</strong></td>
<td><strong>111</strong></td>
</tr>
<tr>
<td><strong>Acre-Feet</strong></td>
<td><strong>19</strong></td>
<td><strong>340</strong></td>
</tr>
</tbody>
</table>
These savings were compared to the original goals set in Chapter 4. As mentioned earlier, water conservation goal setting is an iterative process; original goals are established, conservation measures are evaluated and selected based on appropriate criteria, and the resulting water savings are compared to the original goals. In this case, the resulting water savings are close to the original goals.

Table 6.4 compares the anticipated water savings from the selected measures with the original goals and then adjusts the water-saving goals for this plan.

<table>
<thead>
<tr>
<th>Water Use Categories:</th>
<th>Total Projected Water Use (2013 to 2022) (AF)</th>
<th>Reduction Goals for Planning Horizon (%)</th>
<th>Total Water Savings from Selected Programs (AF) (%)</th>
<th>Resulting Reduction (%)</th>
<th>Adjusted Reduction Goals for Planning Horizon (AF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single-Family</td>
<td>19,642</td>
<td>5.0%</td>
<td>982</td>
<td>1,303</td>
<td>6.6%</td>
</tr>
<tr>
<td>Multi-Family</td>
<td>11,602</td>
<td>5.0%</td>
<td>580</td>
<td>1,302</td>
<td>11.2%</td>
</tr>
<tr>
<td>Commercial</td>
<td>10,387</td>
<td>2.5%</td>
<td>260</td>
<td>604</td>
<td>5.8%</td>
</tr>
<tr>
<td>Industrial</td>
<td>4,778</td>
<td>2.5%</td>
<td>119</td>
<td>340</td>
<td>7.1%</td>
</tr>
<tr>
<td>Municipal</td>
<td>225</td>
<td>0.5%</td>
<td>1</td>
<td>1</td>
<td>0.5%</td>
</tr>
<tr>
<td>Non-Metered Customers - Meter Replacement and EMAP</td>
<td>18,207</td>
<td>15.0%</td>
<td>2,731</td>
<td>2,613</td>
<td>14.4%</td>
</tr>
<tr>
<td>Unaccounted-for Losses (currently 9%)</td>
<td>5,836</td>
<td>8.0%</td>
<td>648</td>
<td>1,502</td>
<td>6.7%</td>
</tr>
<tr>
<td>Total Water Production:</td>
<td>70,677</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Demand Reduction:</td>
<td></td>
<td></td>
<td>5,322</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Percent Reduction:</td>
<td></td>
<td></td>
<td>8%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Over the ten-year planning period, the selected measures/programs provide an overall estimated water savings of 7,665 acre-feet. This is higher than the initial water savings goals set in Chapter 4. The Non-Metered Customer category goal was adjusted down to 14.4 percent from the initial goal of 15 percent, to reflect the estimated savings from the selected Non-Metered Customer program. Goals for all other categories, with the exception of the Municipal category, were adjusted up from the original City goals. The adjusted goals reflect the goals believed to be obtainable by City staff.

After the goals were adjusted to better reflect the expected water savings, the estimated water use reduction is 6,721 acre-feet or ten percent. Therefore, Englewood will target a reduction in its water use by ten percent over the next ten years because of implementation of this plan.
CHAPTER 7 – INTEGRATE RESOURCES AND MODIFY FORECASTS

Englewood operates in a manner to make the most efficient use of its resources. Each year, a budget is carefully developed with the given funding and personnel available. While water conservation has been an effort that has been gradually incorporated, implementation of the measures and programs selected in this plan will require reevaluation of staff resources and pursuit of additional funding in the form of grants.

Implementation Schedule

Water savings resulting from implementation of this Water Conservation Plan will occur gradually as the City has the resources to implement each selected measure and program and the water users respond to that implementation. Grant availability will be crucial in the timing of implementation.

The following table proposes a schedule of implementation. For illustrative purposes, a three-year schedule has been proposed and should be interpreted that Year 1 is the City’s first priority of projects followed by Year 2 and then Year 3 and will not be within three years exactly. The proposed implementation of this Water Conservation Plan will occur as the necessary resources become available.

This table does not include existing measures that are already implemented and are not scheduled for expansion and improvements. Those measures include recycling WTP filter backwash and billing software upgrades. The City will continue these programs as is. However, the City would like to expand upon EMAP, water waste ordinances and the school education program, so these measures are included in the implementation schedule.
Table 7.1 – City of Englewood Water Conservation Plan Implementation Schedule

<table>
<thead>
<tr>
<th>Measure/Program</th>
<th>Implementation Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>YEAR 1 (1ST PRIORITY)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Utility Maintenance Programs</strong></td>
<td>Englewood Meter Assistance Program (EMAP)</td>
</tr>
<tr>
<td><strong>Regulatory Standards Program</strong></td>
<td>General Evaluation of Policies that Encourage Water</td>
</tr>
<tr>
<td></td>
<td>Savings</td>
</tr>
<tr>
<td></td>
<td>Water Waste Ordinance</td>
</tr>
<tr>
<td><strong>Educational Programs</strong></td>
<td>School Education Program (K-12 Education)</td>
</tr>
<tr>
<td></td>
<td>Online Access to Water Bill and History</td>
</tr>
<tr>
<td><strong>YEAR 2 (2ND PRIORITY)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Regulatory Standards Program</strong></td>
<td>Drought Mitigation Plan</td>
</tr>
<tr>
<td><strong>Educational Programs</strong></td>
<td>Public Education - Newsletter, Bill Stuffers, Website</td>
</tr>
<tr>
<td></td>
<td>Distribute ET Irrigation Scheduling in Water Bill</td>
</tr>
<tr>
<td><strong>Rebate and Incentive Programs</strong></td>
<td>Residential water audits</td>
</tr>
<tr>
<td><strong>YEAR 3 (3RD PRIORITY)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Utility Maintenance Programs</strong></td>
<td>Leak Detection &amp; Repair</td>
</tr>
<tr>
<td><strong>Educational Programs</strong></td>
<td>Educational Kits</td>
</tr>
<tr>
<td><strong>Rebate and Incentive Programs</strong></td>
<td>Commercial &amp; Industrial water audits</td>
</tr>
<tr>
<td><strong>Regulatory Standard Programs</strong></td>
<td>Water Rates that Encourage Water Savings</td>
</tr>
</tbody>
</table>
The total cost to implement the conservation plan is $291,625 (this figure includes the costs for the initial year of operation). The implementation schedule will be most affected by available staff time and funding. While this schedule may be optimistic, the goal is to allow time for researching and obtaining grants to develop sound programs for a higher probability of success.

It should be noted that the implementation costs include both cost to implement the water conservation measure/program and staff time associated with the implementation and is not necessarily representative of the capital outlay requirement. Please refer to Appendix A for the detailed breakdown of costs for each measure/program.

**Modified Demand Forecast and Benefits of Conservation**

As mentioned previously, the total projected annual water demand (without water conservation) for Englewood is estimated at 6,484 acre-feet. The anticipated annual savings, after full implementation is approximately 460 acre-feet, reducing the annual demand to 6,024 acre-feet annually.

**Benefits of Water Conservation**

Because Englewood has sufficient water supply and treatment capacity, this planning effort will not delay any future improvement projects or put off water supply acquisition. However, Englewood is still committed to conserving their water supply for the benefit of their customers and the broader region.
The schedule for implementation is presented in Table 7.1 in Chapter 7. The process for implementing the plan and monitoring its success is outlined in this chapter.

**Public Participation**

One of CWCB’s requirements for a State-approved Water Conservation Plan is to solicit public comments on the draft plan for not less than a 60-day period unless otherwise specified by City policy.

Through this water conservation planning process, the public was notified and given 60 days to comment. Appendix B includes affidavits from the local newspaper and Englewood’s Citizen Newsletter that legal notice was published. The plan was available on Englewood’s website and at the Utilities Department for review. Written comments and responses to those comments are included in Appendix C.

**Monitoring and Evaluation**

Monitoring the success of this Water Conservation Plan includes measuring water use as well as money spent on the selected conservation measures and programs. Customer class water use will be monitored for programs such as a water rate study. Table 8.1 presents the information that will be tracked for each measure proposed by the City. More specific monitoring information will be developed as each measure is implemented.

Many of the costs evaluated in the cost-benefit analysis include annual costs for follow up. This will allow staff to specifically set aside time to monitor and evaluate the success of the conservation measures and programs. Expenditures for conservation will be documented by staff and reported to City Council on a regular basis. This will be valuable information in evaluating the cost-benefit ratio and to validate the success of implementing the selected conservation measures and programs. Since the programs will be implemented in phases, there will be time to evaluate and establish the appropriate method to monitor success of each program and measure.

**Plan Updates and Revisions**

The required schedule for updating the Water Conservation Plan is seven years. The progress towards achieving the water-savings goals will be monitored on an annual basis by Englewood. The City may choose to update this plan prior to seven years if implementation and actual water savings deviate too much from these projections. This deviation may be caused by several factors including...
less than anticipated participation and the inability to implement the plan due to lack of staff availability or funding.

Plan Adoption and Approval

After the public comment period, the comments were incorporated into the plan. The Englewood City Council formally adopted the plan prior to submittal to CWCB for final approval. The resolution is attached as Appendix D. Implementation will begin after CWCB approval is received. It is only after final CWCB approval that Englewood will be eligible for a water-efficiency grant through CWCB for plan implementation.
Table 8.1 – Tracking Matrix for Monitoring Water Conservation Measures

<table>
<thead>
<tr>
<th>Conservation Measures and Programs</th>
<th>Number of Rebates/Giveaways (A)</th>
<th>Individual Customer Water use (B)</th>
<th>Customer Class Water Use (C)</th>
<th>Per Capita water use (D)</th>
<th>Unaccounted for Water (E)</th>
<th>Peak &amp; Annual Treated &amp; Total Water Demand (F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Meter Replacement Program</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recycling WTP Filter Backwash</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential water audits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Englewood Meter Assistance Program (EMAP)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leak Detection &amp; Repair</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educational Kits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Evaluation of Policies that Encourage Water Savings</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial &amp; Industrial water audits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Online Access to Water Bill and History</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Waste Ordinance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Rates that Encourage Water Savings</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School Education Program (K-12 Education)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public Education - Newsletter, Bill Stuffers, Website</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distribute ET Irrigation Scheduling in Water Bill</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Billing Software Upgrades</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTES:**

(A) The number of rebates and/or giveaways will be tracked for those installations that have been proven.

(B) Water use prior and post installation will be tracked to determine if a savings has occurred.

(C) These measures affect specific customer classes that can be tracked to determine savings.

(D) A reduction in the Gallons per Capita Water Use will show an overall savings.

(E) These measures track uses that are not billed but are supply-side related.

(F) Reductions in peak and annual water use will show an overall savings.
REFERENCES:


City of Englewood Water Supply and Demand, for Windy Gap Firming, October 13, 2004.


Klien, Bobbie, Kenney, Doug, Lowrey, Jessica, and Goemans, Chris. Factors Influencing Residential Water Demand: A Review of the Literature (Updated 1/12/07).


U.S. Environmental Protection Agency, August 6, 1998. WATER CONSERVATION PLAN GUIDELINES, Appendix B.

Tetra Tech RMC, Memorandum from Doug Seeley regarding Water Demand Projections, September 8, 2003.


**Englewood Meter Replacement Program - Existing Measure**

The City is working to convert the flat rate customers to variable rate customers as accounts change owners.

<table>
<thead>
<tr>
<th>Planning Period</th>
<th>2013 to 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years in Planning Period</td>
<td>10</td>
</tr>
<tr>
<td>Program Length</td>
<td>10</td>
</tr>
</tbody>
</table>

### Estimated Water Savings

| Estimated Annual Water Savings | 5.1 MG/yr |
| Estimated Savings over Planning Period | 278.9 MG |

**Notes:**

Englewood has saved an average 12.8 MG/year for an average of 127 taps/year from 2006-2011 (a savings rate of about 101,411 gal/tap/year).

Estimated Savings over Planning Period is calculated by compounding the estimated annual water savings per the total number of participants for each given year.

### Costs

**Total Cost to Water Provider**

<table>
<thead>
<tr>
<th>Materials Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit Cost</td>
</tr>
<tr>
<td>Number of Participants</td>
</tr>
<tr>
<td>Annual Materials</td>
</tr>
</tbody>
</table>

For this program, material costs are the responsibility of the customer. Labor costs are not considered. The replacement rate is expected to be lower than average, at approximately 50 taps/year.

| Estimated Annual Cost | $0.00 /year |
| Estimated Total Cost over Planning Period Including Set-up | $0.00 |
| Cost per 1000 Gallons Saved | $0.00 |
**Englewood Meter Assistance Program (EMAP) - Existing Measure**

The EMAP program takes the difference between what the customer pays for the non-metered rate and what the customer would pay for the metered rate and uses that money to help pay the cost of installing the water meter. Englewood would like to expand upon their current program by providing 50 to 100 meters, at no cost to the customer, as further incentive for meter replacement.

<table>
<thead>
<tr>
<th>Planning Period</th>
<th>2013 to 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years in Planning Period</td>
<td>10</td>
</tr>
<tr>
<td>Program Length</td>
<td>10</td>
</tr>
</tbody>
</table>

**Estimated Water Savings**

| Estimated Annual Water Savings | 10 MG/yr |
| Estimated Savings over Planning Period | 557.8 MG |

**Notes:**

Englewood has saved an average 12.8 MG/year for an average of 127 taps/year from 2006-2011 (a savings rate of about 101,411 gal/tap/year). The annual savings reflect the replacement of 100 meters. Estimated Savings over Planning Period is calculated by compounding the estimated annual water savings per the total number of participants for each given year.

**Costs**

<table>
<thead>
<tr>
<th>Total Cost to Water Provider</th>
</tr>
</thead>
</table>

**Materials Costs**

<table>
<thead>
<tr>
<th>Unit Cost</th>
<th>$500.00/unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Participants</td>
<td>100 /year</td>
</tr>
<tr>
<td>Annual Materials</td>
<td>$50,000.00 /year</td>
</tr>
</tbody>
</table>

For this program, Englewood would pay the cost to replace the meter. As with the Meter Replacement Program, labor costs are not considered. This program is anticipated to increase the number of meter conversion to a total of 120-150 meters replaced/year combined with the Meter Replacement Program.

<table>
<thead>
<tr>
<th>Estimated Annual Cost</th>
<th>$50,000.00 /year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Total Cost over Planning Period Including Set-up</td>
<td>$500,000.00</td>
</tr>
<tr>
<td>Cost per 1000 Gallons Saved</td>
<td>$0.90</td>
</tr>
</tbody>
</table>
## Leak Detection and Repair Program

This measure would include electronic leak detection by a third party consultant every 5 years.

<table>
<thead>
<tr>
<th>Planning Period</th>
<th>2013 to 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years in Planning Period</td>
<td>10 years</td>
</tr>
<tr>
<td>Program Frequency</td>
<td>2 years</td>
</tr>
</tbody>
</table>

### Estimated Water Savings

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Estimated Savings Rate</td>
<td>1.0%</td>
</tr>
<tr>
<td>Annual Estimated Water Production without Savings</td>
<td>2,303 MG/yr</td>
</tr>
<tr>
<td>Estimated Water Production over Planning Period without Savings</td>
<td>23,030 MG</td>
</tr>
<tr>
<td>Estimated Annual Water Savings</td>
<td>23 MG/yr</td>
</tr>
<tr>
<td>Estimated Savings over Planning Period</td>
<td>230 MG</td>
</tr>
</tbody>
</table>

### Costs

#### Total Cost to Water Provider

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Third Party Costs (Leak Detection Consult)</td>
<td>$109,362.00 /year</td>
</tr>
</tbody>
</table>

### Notes:

- Current system leakage/loss rate is estimated at 9%.
- The estimated production (without savings) equals the projected water usage plus 9%.
- Current system leakage/loss rate is estimated at 9%.
- The estimated production (without savings) equals the projected water usage plus 9%.

- The City may evaluate approximately 50% of their system (water mains) every 5 years. Cost estimate for an outside consultant to perform electronic leak detection is $0.25 per foot. Therefore, a 165.7 mile system of pipeline would total $109,362.00.

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Annual Cost</td>
<td>$109,362.00 /year</td>
</tr>
<tr>
<td>Estimated Total Cost over Planning Period Including Set-up</td>
<td>$218,724.00</td>
</tr>
<tr>
<td>Cost per 1000 Gallons Saved</td>
<td>$0.95</td>
</tr>
</tbody>
</table>
**Billing Software Upgrades - Existing Measure**

Software upgrades allow water providers to quickly and easily retrieve water usage data and relay that data to their customers, helping customers to monitor their water usage and conservation. Software upgrades help staff to identify system problems, faulty meters and distinguish between customer categories. The City upgrades their billing system every three to five years.

<table>
<thead>
<tr>
<th>Planning Period</th>
<th>2013 to 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years in Planning Period</td>
<td>10</td>
</tr>
<tr>
<td>Program Length</td>
<td>5 years</td>
</tr>
</tbody>
</table>

**Estimated Water Savings**

<table>
<thead>
<tr>
<th>Annual Estimated Savings Rate</th>
<th>0.25%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Annual Water Savings</td>
<td>5.8 MG/yr</td>
</tr>
<tr>
<td>Estimated Savings over Planning Period</td>
<td>28.8 MG</td>
</tr>
</tbody>
</table>

**Notes:**

- Current system leakage/loss rate is estimated at 9%. Software upgrades are estimated to reduce apparent losses that occur due to billing system errors by a quarter of percent.
- The estimated production (without savings) equals the projected water usage plus 9%.

**Costs**

**Total Cost to Water Provider**

<table>
<thead>
<tr>
<th>Annual Materials Costs</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Materials</td>
<td>$11,000.00 /year</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>One Time Labor and Material Costs</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Software Upgrade</td>
<td>$110,000.00</td>
</tr>
</tbody>
</table>

| Estimated Annual Cost                           | $308,000.00 /year         |
| Estimated Total Cost over Planning Period Including Set-up | $308,000.00 |
| Cost per 1000 Gallons Saved                     | $10.70                    |
**Recycling WTP Filter Backwash - Existing Measure**

Currently, 100 percent of the backwash at the City waste water treatment plant is recycled back into the treatment process.

<table>
<thead>
<tr>
<th>Planning Period</th>
<th>2013 to 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years in Planning Period</td>
<td>10</td>
</tr>
<tr>
<td>Program Length</td>
<td>10</td>
</tr>
</tbody>
</table>

**Estimated Water Savings**

<table>
<thead>
<tr>
<th>Planning Period Savings Rate</th>
<th>1.0%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Annual Water Savings</td>
<td>23.0 MG/yr</td>
</tr>
<tr>
<td>Estimated Savings over Planning Period</td>
<td>230.3 MG</td>
</tr>
</tbody>
</table>

**Notes:**

Englewood estimates that 1% of the total treated water is recycled.

**Costs**

**Total Cost to Water Provider**

<table>
<thead>
<tr>
<th>Materials Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit Cost</td>
</tr>
<tr>
<td>Number of Participants</td>
</tr>
<tr>
<td>Annual Materials</td>
</tr>
</tbody>
</table>

| Estimated Annual Cost | $0.00 /year |
| Estimated Total Cost over Planning Period Including Set-up | $0.00 |
| Cost per 1000 Gallons Saved | $0.00 |
### General Evaluation of Policies that Encourage Water Savings

The City would like to evaluate policies that would encourage Municipal water savings.

<table>
<thead>
<tr>
<th>Planning Period</th>
<th>2013 to 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years in Planning Period</td>
<td>10</td>
</tr>
<tr>
<td>Program Length</td>
<td>10 years</td>
</tr>
</tbody>
</table>

#### Estimated Water Savings

<table>
<thead>
<tr>
<th>Customer Category</th>
<th>Average Water Use</th>
<th>Estimated Annual Water Savings</th>
<th>Estimated Annual Water Savings Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipal</td>
<td>7 MG</td>
<td>36,674.29 gallons/yr</td>
<td>0.5%</td>
</tr>
</tbody>
</table>

#### Notes:
This measure affects only the Municipal category. Assume a conservative reduction of 0.25% of projected annual water use.

#### Costs

<table>
<thead>
<tr>
<th>One Time Labor and Material Costs</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>One Time Materials Cost</td>
<td>$0.00</td>
</tr>
<tr>
<td>One Time Staff Costs</td>
<td>$750.00</td>
</tr>
<tr>
<td>One Time Labor/Material Cost</td>
<td>$750.00</td>
</tr>
</tbody>
</table>

- Estimated Annual Cost: $0.00/year
- Estimated Total Cost over Planning Period Including Set-up: $750.00
- Cost per 1000 Gallons Saved: $2.05
Water Waste Ordinance - Existing Measure

Planning Period: 2013 to 2022
Years in Planning Period: 10
Program Length: 1 year

Estimated Water Savings

<table>
<thead>
<tr>
<th>Customer Category</th>
<th>Average Annual Water Use (MG/yr)</th>
<th>Estimated Annual Water Savings MG/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single-Family</td>
<td>640</td>
<td>1.6</td>
</tr>
<tr>
<td>Multi-Family</td>
<td>378</td>
<td>0.9</td>
</tr>
<tr>
<td>Commercial</td>
<td>338</td>
<td>0.8</td>
</tr>
<tr>
<td>Industrial</td>
<td>156</td>
<td>0.4</td>
</tr>
<tr>
<td>Non-Metered Customers (all categories)</td>
<td>593</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Annual Estimated Savings Rate: 0.25%

Estimated Annual Water Savings: 5 MG/yr
Estimated Savings over Planning Period: 53 MG

Costs

Total Cost to Water Provider

<table>
<thead>
<tr>
<th>One Time Labor and Material Costs</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>One Time Staff Labor Costs</td>
<td>$500.00</td>
</tr>
<tr>
<td>One Time Material Costs</td>
<td>$0.00</td>
</tr>
<tr>
<td>One Time Labor/Material Cost</td>
<td>$500.00</td>
</tr>
</tbody>
</table>

Estimated one time staff costs for Staff to spend approximately 10 hours at $50.00/hour to evaluate current policies within the City.

Water Rates

<table>
<thead>
<tr>
<th>Rate Category</th>
<th>Current Rates (per 1000 gallons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Fee for First 400,000 gallons</td>
<td>$3.29</td>
</tr>
</tbody>
</table>

Estimated Average Annual Revenue without Water Savings: $6,927,128.80 /year
Estimated Average Annual Revenue with Water Savings: $6,909,810.98 /year
Estimated Annual Revenue Loss Related to Water Savings: $17,317.82 /year

Estimated Annual Cost: $17,317.82 /year
Est. Cost over Planning Period not including Lost Revenue: $500.00
Est. Cost over Planning Period Including Set-up and Lost Revenue: $173,678.22
Cost per 1000 Gallons Saved: $3.30

Notes:
- This measure affects all customer categories with the exception of the Municipal category.
- Estimated one time staff costs for Staff to spend approximately 10 hours at $50.00/hour to evaluate current policies within the City.
- The annual revenue loss was estimated based on current in-city rates for all City customers.
- Estimated Revenue assumes that the current rates will not change over the planning period.
**Water Rate Structure Changes**

Based on many water conservation studies, an inclining block water rate design most effectively encourages efficient water use. A rate study may be necessary to ensure maximum water conservation savings.

<table>
<thead>
<tr>
<th>Planning Period</th>
<th>2013 to 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years in Planning Period</td>
<td>10</td>
</tr>
<tr>
<td>Program Length</td>
<td>10</td>
</tr>
</tbody>
</table>

### Estimated Water Savings

<table>
<thead>
<tr>
<th>Yearly Estimated Savings Rate</th>
<th>2.0%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Category</td>
<td>Water UseMG/yr</td>
</tr>
<tr>
<td>Single-Family</td>
<td>640</td>
</tr>
<tr>
<td>Multi-Family</td>
<td>378</td>
</tr>
<tr>
<td>Commercial</td>
<td>338</td>
</tr>
<tr>
<td>Industrial</td>
<td>156</td>
</tr>
</tbody>
</table>

**Notes:**
- Assume a conservative reduction of 2% of projected total billed water. Rate change studies have shown a greater savings (Southwest Florida Water Management District study - 13%).
- This measure does not affect non-metered customers.

| Estimated Annual Water Savings | 30 MG/yr |
| Estimated Savings over Planning Period | 302 MG |

### Costs to Water Provider

<table>
<thead>
<tr>
<th>One Time Labor and Material Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Time City Staff Labor</td>
</tr>
<tr>
<td>Rate Study performed by Consultants</td>
</tr>
<tr>
<td>One Time Labor/Material Cost</td>
</tr>
</tbody>
</table>

### Water Rates

<table>
<thead>
<tr>
<th>Rate Category</th>
<th>Current Rates/Fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Fee for First 400,000 gallons</td>
<td>$3.29</td>
</tr>
</tbody>
</table>

| Estimated Average Annual Revenue without Water Savings | $4,975,229.18/year |
| Estimated Average Annual Revenue with Water Savings   | $4,875,724.60/year |
| Annual Revenue Loss Related to Water Savings          | $99,504.58/year    |

| Estimated Annual Cost | $99,504.58/year |
| Estimated Cost over Planning Period not including Lost Revenue | $40,000.00 |
| Estimated Total Cost over Planning Period Including Set-up and Lost Revenue | $1,035,045.84 |
| Cost per 1000 Gallons Saved | $3.42 |
**Educational Kits**

Self-guided residential educational kits can be designed to include items such as leak detection tablets, surveys, and water saving fixtures. Instructions for conducting the audit and evaluating the results can give residential customers insight and direction on how they can save water and money. The guidance offered in the instructions could lead the customer to take part in other conservation programs offered.

<table>
<thead>
<tr>
<th>Planning Period</th>
<th>2013 to 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years in Planning Period</td>
<td>10</td>
</tr>
<tr>
<td>Program Length</td>
<td>10</td>
</tr>
</tbody>
</table>

### Estimated Water Savings

<table>
<thead>
<tr>
<th></th>
<th>Annual Estimated Savings Rate 2.00%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Water Use (gallons/tap)</td>
</tr>
<tr>
<td></td>
<td>Annual Program Participants</td>
</tr>
<tr>
<td></td>
<td>Estimated Annual Water Savings (gallons/yr)</td>
</tr>
<tr>
<td>Single-Family</td>
<td>78,204</td>
</tr>
<tr>
<td>Multi-Family</td>
<td>404,055</td>
</tr>
</tbody>
</table>

| Estimated Annual Water Savings | 3.2 |
| Estimated Savings over Planning Period | 175.6 |

**Notes:**

Estimated Savings over Planning Period is calculated by compounding the estimated annual water savings per the total number of participants for each given year. Estimated Water Use is based on the following 2005-2011 average:

- Single Family = 0.24 af/tap Potable
- Multi-Family = 1.24 af/tap

### Costs

**Total Cost to Water Provider**

<table>
<thead>
<tr>
<th>Labor Costs</th>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff Hours (Website updates, etc.)</td>
<td>Online instruction can be set up on City Website.</td>
</tr>
<tr>
<td>Hourly Cost</td>
<td>Residential water conservation educational kits are available at wholesalers like AM Conservation Group, Inc. for $5.99 per unit for a bulk purchase of 10,000 units. Kits can be customized to include the Englewood's logo.</td>
</tr>
<tr>
<td>Annual Staff Costs</td>
<td></td>
</tr>
<tr>
<td>Evaluation and Follow up Costs</td>
<td></td>
</tr>
<tr>
<td>Annual Labor</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>One Material Costs</th>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Time Materials Cost (Bulk Purchase of 10000 Audit Kits)</td>
<td>The annual revenue loss was estimated based on current rates for all Town customers.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Water Rates</th>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate Category</td>
<td></td>
</tr>
<tr>
<td>Base Fee for First 400,000 gallons</td>
<td>Estimated Revenue assumes that the current rates will not change over the planning period.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Estimated Average Annual Revenue without Water Savings</th>
<th>$1,119,059.82 /year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Average Annual Revenue with Water Savings</td>
<td>$1,097,562.52 /year</td>
</tr>
<tr>
<td>Annual Revenue Loss Related to Water Savings</td>
<td>$21,497.29 /year</td>
</tr>
</tbody>
</table>

| Estimated Annual Cost                       | $21,497.29 /year    |
| Estimated Cost over Planning Period not including Lost Revenue | $59,900.00          |
| Estimated Total Cost over Planning Period Including Set-up and Lost Revenue | $274,872.95          |
| Cost per 1000 Gallons Saved                | $1.57               |
Public Education - bill stuffers and website

Water providers may periodically provide customers with water conservation tips in water bills, on their website, and at the front desk of their office.

<table>
<thead>
<tr>
<th>Planning Period</th>
<th>2013 to 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years in Planning Period</td>
<td>10</td>
</tr>
<tr>
<td>Program Length</td>
<td>10</td>
</tr>
</tbody>
</table>

### Estimated Water Savings

<table>
<thead>
<tr>
<th>Customer Category</th>
<th>Average Annual Water Use MG</th>
<th>Estimated Annual Water Savings MG/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single-Family</td>
<td>640</td>
<td>6.4</td>
</tr>
<tr>
<td>Multi-Family</td>
<td>378</td>
<td>3.8</td>
</tr>
<tr>
<td>Commercial</td>
<td>338</td>
<td>3.4</td>
</tr>
</tbody>
</table>

**Estimated Annual Water Savings**: 13.6 MG/yr

**Estimated Savings over Planning Period**: 136 MG

### Costs

#### Total Cost to Water Provider

**Labor Costs**

- Staff Hours: 40 /year
- Hourly Cost: $50.00 /hour
- Annual Labor: $2,000.00 /year

**Materials Costs**

- Unit Cost (cost of Bill Stuffers): $0.75/participant
- Number of Participants: 10,342 /year
- Annual Materials: $7,756.50 /year

**Water Rates**

<table>
<thead>
<tr>
<th>Rate Category</th>
<th>Current Rates (per 1000 gallons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Fee for First 400,000 gallons</td>
<td>$3.29</td>
</tr>
</tbody>
</table>

**Estimated Average Annual Revenue without Water Savings**: $4,463,035.40 /year

**Estimated Average Annual Revenue with Water Savings**: $4,418,405.05 /year

**Estimated Annual Revenue Loss Related to Water Savings**: $44,630.35 /year

**Estimated Annual Cost**: $54,386.85 /year

**Estimated Cost over Planning Period not including Lost Revenue Revenue**: $97,565.00

**Cost per 1000 Gallons Saved**: $4.01
**Online Access to Water Bill & History**

Beginning in 2013, Englewood will be able to allow customers to access their water bill history.

### Planning Period 2013 to 2022

<table>
<thead>
<tr>
<th>Years in Planning Period</th>
<th>10 years</th>
</tr>
</thead>
</table>

### Estimated Water Savings

<table>
<thead>
<tr>
<th>Customer Category</th>
<th>Average Water Use MG</th>
<th>Estimated Annual Water Savings MG/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single-Family</td>
<td>640</td>
<td>6.4</td>
</tr>
<tr>
<td>Multi-Family</td>
<td>378</td>
<td>3.8</td>
</tr>
<tr>
<td>Commercial</td>
<td>338</td>
<td>3.4</td>
</tr>
<tr>
<td>Industrial</td>
<td>156</td>
<td>1.6</td>
</tr>
</tbody>
</table>

**Notes:**
- This measure was analyzed for metered customers only.
- Estimated Annual Water Savings: 15.1 MG/yr
- Estimated Savings over Planning Period: 151 MG

### Costs

#### Total Cost to Water Provider

<table>
<thead>
<tr>
<th>Labor Costs</th>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff Hours</td>
<td>0/year</td>
</tr>
<tr>
<td>Hourly Cost</td>
<td>$50.00/hour</td>
</tr>
<tr>
<td>Annual Labor</td>
<td>$0.00/year</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Materials Costs</th>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit Cost</td>
<td>$0.00/participant</td>
</tr>
<tr>
<td>Number of Participants</td>
<td>0/year</td>
</tr>
<tr>
<td>Annual Materials</td>
<td>$0.00/year</td>
</tr>
</tbody>
</table>

### Water Rates

<table>
<thead>
<tr>
<th>Rate Category</th>
<th>Current Rates/Fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Fee for First 400,000 gallons</td>
<td>$3.29</td>
</tr>
</tbody>
</table>

**Notes:**
- The annual revenue loss was estimated based on current rates for all Town customers.
- Estimated Revenue assumes that the current rates will not change over the planning period.

**Estimated Average Annual Revenue without Water Savings:** $4,975,229.18/year  
**Estimated Average Annual Revenue with Water Savings:** $4,925,476.89/year  
**Estimated Annual Revenue Loss Related to Water Savings:** $49,752.29/year

<table>
<thead>
<tr>
<th>Estimated Annual Cost</th>
<th>$49,752.29/year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Cost over Planning Period not including Lost Revenue</td>
<td>$0.00</td>
</tr>
<tr>
<td>Estimated Total Cost over Planning Period Including Set-up and Lost Revenue</td>
<td>$497,522.92</td>
</tr>
<tr>
<td>Cost per 1000 Gallons Saved</td>
<td>$3.29</td>
</tr>
</tbody>
</table>
Post or Distribute ET Irrigation Scheduling

ET irrigation schedules using historical averages of weather data can be prepared by the City prior to the irrigation season and sent out to all customer categories to reference when programming their irrigation systems. Northern Colorado Water Conservancy District has tools on their website that can aid with this calculation. The schedule could be printed on the bill or posted on the web at the beginning or for the duration of the irrigation season.

<table>
<thead>
<tr>
<th>Planning Period</th>
<th>2013 to 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years in Planning Period</td>
<td>10</td>
</tr>
<tr>
<td>Program Length</td>
<td>10 years</td>
</tr>
</tbody>
</table>

Estimated Water Savings

<table>
<thead>
<tr>
<th>Customer Category</th>
<th>Average Outdoor Water Use</th>
<th>Estimated Annual Water Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single-Family</td>
<td>320 MG</td>
<td>3.2 MG/yr</td>
</tr>
<tr>
<td>Multi-Family</td>
<td>189 MG</td>
<td>1.9 MG/yr</td>
</tr>
<tr>
<td>Commercial</td>
<td>169 MG</td>
<td>1.7 MG/yr</td>
</tr>
</tbody>
</table>

Estimated Annual Water Savings: 6.8 gallons/yr
Estimated Savings over Planning Period: 68 gallons

Costs

Total Cost to Water Provider

<table>
<thead>
<tr>
<th>Labor Costs</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff Hours</td>
<td>8 /year</td>
<td></td>
</tr>
<tr>
<td>Hourly Cost</td>
<td>$50.00 /hour</td>
<td></td>
</tr>
<tr>
<td>Annual Labor</td>
<td>$400.00 /year</td>
<td></td>
</tr>
</tbody>
</table>

Materials Costs

| Unit Cost (cost of Bill Stuffers) | $0.75 /participant |
| Number of Participants | 10,342 /year       |
| Annual Materials     | $7,756.50 /year    |

Water Rates

<table>
<thead>
<tr>
<th>Rate Category</th>
<th>Current Rates/Fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Fee for First 400,000 gallons</td>
<td>$3.29</td>
</tr>
</tbody>
</table>

Estimated Average Annual Revenue without Water Savings: $2,231,517.70 /year
Estimated Average Annual Revenue with Water Savings: $2,209,202.52 /year
Estimated Annual Revenue Loss Related to Water Savings: $22,315.18 /year

Estimated Annual Cost: $30,471.68 /year
Estimated Cost over Planning Period not including Lost Revenue: $81,565.00
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue: $304,716.77
Cost per 1000 Gallons Saved: $4.49
# School Education Program - Existing

*Each year, Englewood hosts school children at the water treatment plant for water day.*

<table>
<thead>
<tr>
<th>Planning Period</th>
<th>2013 to 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years in Planning Period</td>
<td>10 years</td>
</tr>
<tr>
<td>Program Length</td>
<td>10 years</td>
</tr>
</tbody>
</table>

## Estimated Water Savings

| Customer Category | Average Water Use MG | Estimated Annual Water Savings MG/yr | Notes: |
|-------------------|----------------------|-------------------------------------|
| Single-Family     | 640                  | 3.2                                 |
| Multi-Family      | 189                  | 0.9                                 |

Annual Estimated Savings Rate 0.5%

### Estimated Annual Water Savings

<table>
<thead>
<tr>
<th></th>
<th>4.1 gallons/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Savings over Planning Period</td>
<td>41.5 gallons</td>
</tr>
</tbody>
</table>

## Costs

### Total Cost to Water Provider

<table>
<thead>
<tr>
<th>Labor Costs</th>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff Hours</td>
<td>16 /year</td>
</tr>
<tr>
<td>Hourly Cost</td>
<td>$50.00/hour</td>
</tr>
<tr>
<td>Annual Labor</td>
<td>$800.00/year</td>
</tr>
</tbody>
</table>

### Materials Costs

<table>
<thead>
<tr>
<th>Annual Materials Budget</th>
<th>$500 /year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Materials</td>
<td>$500.00 /year</td>
</tr>
</tbody>
</table>

## Water Rates

<table>
<thead>
<tr>
<th>Rate Category</th>
<th>Current Rates/Fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Fee for First 400,000 gallons</td>
<td>$3.29</td>
</tr>
</tbody>
</table>

### Estimated Average Annual Revenue

- Without Water Savings: $621,873.21 /year
- With Water Savings: $608,235.05 /year

### Annual Revenue Loss Related to Water Savings

$13,638.15 /year

### Estimated Annual Cost

$14,938.15 /year

### Estimated Cost over Planning Period not including Lost Revenue

$13,000.00

### Estimated Total Cost over Planning Period Including Set-up and Lost Revenue

$149,381.54

Cost per 1000 Gallons Saved $3.60
### Residential Water Audits

The City envisions a residential audit program in which local plumbers may be utilized to perform water audits for customers.

<table>
<thead>
<tr>
<th>Planning Period</th>
<th>2013 to 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years in Planning Period</td>
<td>10</td>
</tr>
<tr>
<td>Program Length</td>
<td>10</td>
</tr>
</tbody>
</table>

### Estimated Water Savings

<table>
<thead>
<tr>
<th>Annual Estimated Residential Water Use Per Tap without Savings</th>
<th>gallons/tap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single-Family</td>
<td>78,204</td>
</tr>
<tr>
<td>Multi-Family</td>
<td>404,055</td>
</tr>
<tr>
<td>Total</td>
<td>482,259</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Annual Estimated Savings Rate</th>
<th>3%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Program Participants/year</td>
<td>186</td>
</tr>
<tr>
<td>Maximum No. of Participants over Planning Period</td>
<td>1860</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Annual Estimated Residential Water Use Per Tap with Savings</th>
<th>gallons/tap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single-Family</td>
<td>75,858</td>
</tr>
<tr>
<td>Multi-Family</td>
<td>391,934</td>
</tr>
<tr>
<td>Estimated Annual Water Savings</td>
<td>2.7 gallons/yr</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Estimated Savings over Planning Period</th>
<th>148 gallons</th>
</tr>
</thead>
</table>

### Costs

<table>
<thead>
<tr>
<th>Total Cost to Water Provider</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Labor Costs</strong></td>
</tr>
<tr>
<td>Staff Hours (Website updates, etc.)</td>
</tr>
<tr>
<td>Hourly Cost</td>
</tr>
<tr>
<td>Annual Labor</td>
</tr>
<tr>
<td><strong>Materials Costs</strong></td>
</tr>
<tr>
<td>Unit Cost</td>
</tr>
<tr>
<td>Number of Participants/year</td>
</tr>
<tr>
<td>Annual Materials/year</td>
</tr>
</tbody>
</table>

### Water Rates (2012)

<table>
<thead>
<tr>
<th>Rate Category</th>
<th>Current Rates/Fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Fee for First 400,000 gallons</td>
<td>$3.29</td>
</tr>
</tbody>
</table>

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Average Annual Revenue without Water Savings</td>
<td>$482,259.48/year</td>
</tr>
<tr>
<td>Estimated Average Annual Revenue with Water Savings</td>
<td>$480,812.70/year</td>
</tr>
<tr>
<td><strong>Annual Revenue Loss Related to Water Savings</strong></td>
<td>$1,446.78/year</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Estimated Annual Cost</th>
<th>$2,446.78/year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Cost over Planning Period not including Lost Revenue</td>
<td>$10,000.00</td>
</tr>
<tr>
<td><strong>Estimated Total Cost over Planning Period Including Set-up and Lost Revenue</strong></td>
<td>$24,467.78</td>
</tr>
<tr>
<td><strong>Cost per 1000 Gallons Saved</strong></td>
<td>$0.17</td>
</tr>
</tbody>
</table>
Commercial and Industrial Water Audits

Commercial and Industrial customers are often the highest water users and have been an area of increasing focus for water conservation. Commercial and Industrial customers who participate in a water audit could identify ways to reduce their operating costs over the long term. Water audits can be performed by a third party consultant and is an effective way to educate businesses on how they can save water.

### Estimated Water Savings

<table>
<thead>
<tr>
<th>Customer Category</th>
<th>Water Use Per Tap gallons/tap</th>
<th>Annual Program Participants</th>
<th>Estimated Annual Water Savings gallons/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial</td>
<td>329,110</td>
<td>20</td>
<td>658,219</td>
</tr>
<tr>
<td>Industrial</td>
<td>10,922,526</td>
<td>1</td>
<td>1,092,253</td>
</tr>
</tbody>
</table>

Estimated Annual Water Savings 1.8 gallons/yr
Estimated Savings over Planning Period 96 gallons

Notes:

Estimated Water Use is based on a 1.01 AF/tap use for Commercial taps and 33.52 AF/tap Industrial taps. This is the average tap use for 2006 through 2011.

Estimated Savings over Planning Period is calculated by compounding the estimated annual water savings per the total number of audit participants for each given year. For example, in the first year of the program, there are 20 participants. In the second year of the program, there are water savings from the 20 participants from last year’s program, and new participants thereby compounding the savings.

### Costs

#### Total Cost to Water Provider

<table>
<thead>
<tr>
<th>Labor Costs</th>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff Hours</td>
<td>8/year</td>
</tr>
<tr>
<td>Hourly Cost</td>
<td>$50.00/hour</td>
</tr>
<tr>
<td>Annual Labor</td>
<td>$400.00/year</td>
</tr>
</tbody>
</table>

#### Materials Costs

<table>
<thead>
<tr>
<th>Unit Cost</th>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>$500.00/participant</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of Participants</th>
<th>Annual Materials</th>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>$10,500.00/year</td>
<td></td>
</tr>
</tbody>
</table>

#### Water Rates (2012)

<table>
<thead>
<tr>
<th>Rate Category</th>
<th>Current Rates/Fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Fee for First 400,000 gallons</td>
<td>$3.29</td>
</tr>
</tbody>
</table>

Estimated Average Annual Revenue without Water Savings $176,835.25/year
Estimated Average Annual Revenue with Water Savings $164,654.07/year
Annual Revenue Loss Related to Water Savings $12,181.18/year

Estimated Annual Cost $23,081.18/year
Estimated Cost over Planning Period not including Lost Revenue $109,000.00
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue $230,811.82
Cost per 1000 Gallons Saved $2.40
# Legal Publication Invoice

Cathy Burrage  
City of Englewood Utilities Department**  
1000 Englewood Pkwy.  
Englewood, CO 80110

<table>
<thead>
<tr>
<th>Ad #</th>
<th>Text</th>
<th>Start</th>
<th>Stop</th>
<th>Ins.</th>
<th>Amount</th>
<th>Prepaid</th>
<th>Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>00037986</td>
<td>No.: 4211: WATER</td>
<td>04/26/2013</td>
<td>04/26/2013</td>
<td>1</td>
<td>20.80</td>
<td>0.00</td>
<td>20.80</td>
</tr>
</tbody>
</table>

Payment Terms Net 30

Affidavits will be sent upon receipt of payment.

** Total Due 20.80 **
AFFIDAVIT OF PUBLICATION

State of Colorado
County of Arapahoe

This Affidavit of Publication for the Englewood Herald, a weekly newspaper, printed and published for the County of Arapahoe, State of Colorado, hereby certifies that the attached legal notice was published in said newspaper once in each week, for 1 successive week(s), the last of which publication was made the 26th day of April A.D., 2013, and that copies of each number of said paper in which said Public Notice was published were delivered by carriers or transmitted by mail to each of the subscribers of said paper, according to their accustomed mode of business in this office.

__________________________
for the Englewood Herald
State of Colorado )
County of Arapahoe )ss

The above Affidavit and Certificate of Publication was subscribed and sworn to before me by the above named Gerard Healey, publisher of said newspaper, who is personally known to me to be the identical person in the above certificate on this 26th day of April A.D., 2013.

__________________________
My Commission Expires 06/11/16

Notary Public,
The City of Englewood has completed its 60-day public review period for the Water Conservation Plan that began on May 1, 2013 through July 1, 2013. Official notification was posted in the Englewood Herald (copy attached). A complete copy of the Plan was available at Englewood Civic Center and on the City’s website. During the public-review period, the City received eight comments on the Plan.

Complete copies of the public comments are found at the end of this Appendix. The following is a summary of the core issues conveyed in the public comments, and Englewood’s response.

**Xeriscape Programs and Measures**
A couple of comments requested the incorporation of Xeriscape programs and incentives. The City did consider Xeriscape programs during the initial screening of potential conservation measures and programs. Based on the City’s screening criteria (1. staff time, 2. financial implications and 3. political ramifications), the City does not currently have the staff resources to implement Xeriscape programs and did not feel the programs merited putting money into it. The City will re-evaluate Xeriscape measures and programs with future water conservation planning efforts. Englewood residents are encouraged to utilize Xeriscape landscape.

**Turf and Landscape Restrictions/Standards for New Construction**
One comment requested that Englewood limit the amount of grass for new homes and businesses and require the use of low water usage grasses. Englewood staff considered turf and landscape restrictions/standards for new construction. Based on the City’s screening criteria (1. staff time, 2. financial implications and 3. political ramifications), the City decided to re-evaluate new constructions restrictions and standards with future water conservation planning efforts.

**Mandatory Watering Schedule**
A resident requested that Englewood go to a mandatory three-day-a-week watering schedule on a permanent basis. While this may be necessary during a water shortage or drought, the City felt that a mandatory three-day-a-week watering schedule is not necessary to reach its water conservation goals.

**Water Rates**
There were several comments provided regarding water rates. One comment suggested that the City should use a base rate which accounts for the cost of the system operations, plus a reasonable amount of water for household use and
landscaping; (with an allowance for trees and gardens) and then have a surcharge for excessive use, and an even higher rate for usage that is clearly wasteful or abusive. Incorporated into the Conservation Plan is a water rate study. The study will consider all of the elements of this comment and determine if any changes need to be made to Englewood’s current water rate structure.

One resident was concerned that the City Code regarding the conversion of flat-rate customers to metered customers was changing to require flat-rate customers to install meters. The City Code is not changing. The Englewood Meter Replacement Program (EMAP) discussed in the Plan is voluntary. EMAP takes the difference between what the customer pays for the non-metered rate and what the customer would pay for the metered rate and uses that money to help pay the cost of installing the water meter. If provided a grant by the CWCB, Englewood would like to expand upon their current program by providing 50 to 100 meters at no cost to the customer while the customer continues to pay the flat rate charges, as further incentive for meter replacement. If the customer converts, the money received by the City would go to providing a meter for another flat rate customer.

The City would like to respond to an inaccuracy regarding Englewood’s water rates as compared to Denver’s water rates. The comment states that Denver rates are $2.59/1000 gallons plus $6.33 admin fee; Englewood’s rate is $3.29/1000 gallons plus a $9.71 admin fee. According to the resident, if you use 10,000 gallons in a billing period you pay $4.26/1000 gallons in Englewood, vs $3.22/1000 gallons in Denver. However, the calculation did not consider that Denver Water bills monthly while Englewood bills on a quarterly basis. If we examine a scenario in which one uses 10,000 gallons per month for a three-month period, an Englewood resident would pay $3.61/1,000 gallons as compared to $3.22/1,000 gallons in Denver.

A comment was made regarding the fact that Englewood’s current rate structure charges less per 1,000 gallons for water consumption over 400,000 gallons. The current rate structure is an incentive for industry and large water users and it is unlikely that residents will reach the 400,000 gallon threshold. As mentioned previously, a water rate study will evaluate the current water rates and determine if any changes need to be made to Englewood’s current water rate structure.

Rainwater Harvesting and Graywater Reuse

There were a couple of comments made regarding rainwater harvesting and incorporating the practice into this Plan. Capturing rainwater is an ongoing issue in Colorado, and it is not allowed if it will injure vested water rights. For the most part, Colorado law does not allow homeowner to collect or use rainwater runoff from roof unless their only source of water is a well on the property.

In 2009, however, the Colorado State Legislature passed two laws that carve out exemptions from the general rule - The first law says that if you are not served by a domestic water system and you are located in a designated ground water basin or your collection system qualifies as exempt from 37-92-602(1)(g)(l), you are allowed to
capture rainwater for household, fire protection, stock watering and irrigation of up to one acre of lawns and gardens as long as it is applied to uses specified in the well permit that applies to your property. The second law allows the State to participate in a study of 10 new developments to determine the impact of capturing rainwater on streams, rivers and tributary groundwater.

Additionally a couple of comments were made regarding graywater reuse. The term “graywater” means discharges from bathroom and laundry room sinks, bathtubs, showers, laundry machines and other sources authorized by the Colorado Water Quality Control Commission. In May 2013, the Colorado General Assembly passed House Bill 1044, which authorized the use of graywater. The majority of Englewood’s water rights do not allow for reuse, particularly if that reuse involves further consumption of the water.

Public Education
A couple of comments were provided regarding public education. Based on the City’s screening criteria (1. staff time, 2. financial implications and 3. political ramifications), the City does not currently have the staff resources to devote to educational classes. However, the Plan includes educational kits, public education through newsletter, bill stuffers and the City Website, online access to water bill and history and distribution of ET irrigation scheduling in water bill. The City will re-evaluate education measures and programs with future water conservation planning efforts.

City Building Fixtures
A comment was made that every toilet that is in an Englewood controlled building should be modified or replaced with low usage toilets. Currently, as new toilets and fixtures are needed in City buildings, low water use fixtures are used as a replacement.

Comment 1: I strongly recommend that everyone involved with the water conservation plan be required to read "Rainwater Harvesting for Drylands and Beyond Vol. 1-3" by Brad Landcaster. I would also like to see the city use more xeriscaping around city facilities. It's baffling why you have lawn around places like the WTP, city maintenance facility, Police station, etc. The only person who ever sets foot on those expanses of grass are the people who mow them, truly a waste of water and maintenance. Allow and implement the use of greywater. Give incentives for xeriscaping. Limit the amount of grass for new homes and businesses and require the use of low water usage grasses. Go to a mandatory 3 day a week watering schedule all of the time.

Comment 2: Water is the staff of life…..we all know that. We cannot do without it and our quality of life, particularly here in the dry Western Desert, depends upon the availability of good, clean water. I am sure that is why our civic leaders in Englewood worked so hard to obtain water rights for Englewood—to insure that our quality of life would remain high because we had enough water. In the 1970’s, Englewood had a “flat rate” water billing system. We paid in advance, and the city had a stable, absolutely predictable fund to pay the cost of providing water. Our lawns and neighborhoods were green and inviting. The name “Englewood” seemed to describe our green urban forest.
Now we have water meters and we sell our “excess” water to more affluent neighborhoods. The rationale for this was that by selling our excess water, Englewood would have plenty and our rates would stay lower than surrounding cities. Unfortunately, this hasn’t worked out. Denver rates right now are $2.59/1000 gallons plus $6.33 admin fee; Englewood’s rate is $3.29/1000 gallons plus a $9.71 admin fee. If you use 10,000 gallons in a billing period you pay $4.26/1000 gallons in Englewood, vs $3.22/1000 gallons in Denver. As just a side note, if you are one of Englewood’s “out of city” metered customers, you only pay an admin fee of $9.22. So much for the theory of “sell off our water and pay less for the water we use.”

Over the past several decades, as Englewood’s water policy has moved from a flat rate, predictable cost to a metered cost, Englewood’s neighborhoods have consistently declined in appearance. Certainly a big part of that has been the fact that bluegrass lawns are water guzzlers and have become very expensive to maintain under the current water pricing system, and as you drive through the city you can see numerous homes with dead or abandoned lawns, but also fewer gardens and more neglected trees. No rational person is going to suggest that we encourage bluegrass lawns, or running water in the gutter. But our policies are not encouraging APPROPRIATE WATER USE to Keep Englewood Beautiful. As the appearance of our neighborhoods continues its decline, so does the desire to live here, raise a family, participate in civic affairs, and so forth. Our water policies have contributed to this decline even though we seem to have enough water to take a more enlightened approach, saving water appropriately, but encouraging water use that keeps Englewood an attractive, livable city. It is vexing to me that Englewood’s neighborhoods can’t afford the water that we are selling to other, more affluent metro neighborhoods to waste on THEIR lawns and green space, which they seem to do with reckless abandon, even to the point, in Highlands Ranch, of penalizing homeowners who do not use enough water on their lawns. Obviously, they have recognized that people want to live and do business in a city which has visually appealing trees, landscaping, and so forth. We apparently haven’t figured that out, even though we already have the water resources.

Obviously, the cost of water is a much small part of a family’s budget in a more affluent community than it is in less affluent Englewood. So I see nothing in the proposed Water Conservation Plan to encourage the APPROPRIATE USE of the water Englewood owns to improve the quality of the appearance and livability of the City of Englewood, taking into account that our city is not as affluent as some of our Southern neighbors. For instance, Englewood’s development guidelines require trees, and our Concrete Replacement plan requires replacement trees when a tree is removed next to a sidewalk. But our water conservation plan gives no thought to the cost or effort involved in owning a tree, or the water required. Trees are an expensive addition to a homeowner’s landscape. They require watering, maintenance, insurance, trimming, and probably eventual expensive removal. I guess a “conservation minded” citizen should simply do without trees. But can you imagine Englewood without trees? Certainly the “wood” part refers to our attractive urban forest. I imagine the growing number of apartment dwellers in Englewood feel that their water rate should be lower, after all they don’t have trees, or grass or gardens, or flowers to tend, water and maintain.

So it seems to me that Englewood homeowners should not be disadvantaged when compared to apartment dwellers, or to homeowners in more affluent areas to whom
Englewood sells water. While a homeowner will probably use more water, much of that will to enhance the urban landscape, providing trees and landscaping which enhances all of our quality of life. There is clearly a benefit to the community provided by homeowners who invest in trees and appropriate landscaping, and a water conservation program should recognize this benefit and encourage trees through water pricing. Tree ownership should not be mandated by the City, and then immediately penalized by Englewood’s water pricing policy. Similarly, some thought should be given to the social and community benefit provided by a homeowner who has a flower or vegetable garden, enhancing the beauty of the neighborhood and the livability of the urban landscape. These gardens should be encouraged, not penalized by water pricing when compared to the person who only plants a water guzzling bluegrass lawn. Again, isn’t it curious that the City of Englewood is now subsidizing a community garden for people (apartment dwellers) who cannot have their own garden, but gives no break to the homeowner who owns, pays taxes on, and provides his own garden area. Additionally, it is curious that this “Conservation Plan” doesn’t seem to encourage, or even to allow some innovative conservation techniques, such as grey water systems, rain barrels, low flow toilets, and so forth. Grey water systems should be encouraged when appropriately designed and installed. There is no good reason why bathing or hand washing water cannot be used again for toilet flushing before it passes back into the sanitary sewer system. This does not affect the amount of water available for re-introduction back into the river as treated effluent, but will reduce the amount needed to operate a household. Similarly, cisterns designed to catch and use rainwater for garden or lawn, or household use should be encouraged and allowed. It is curious that Englewood “claims” that runoff rain water creates a storm drainage burden that must be remediated through a tax, but will not allow a homeowner to catch and use that rainwater, thereby eliminating this storm drainage burden. Homeowners should be encouraged to use low flow toilets, low flow showerheads, drip irrigation for flowerbeds and gardens; if not through a rebate program then at least through an education program, classes, product recommendations, and so forth. Some considerable thought should be given to the problems faced by a family trying to plan a family budget and the effects of a constantly changing water bill which seems to be out of their control. A family should be able to predict its water bill with some certainty, even through periods of drought. I suggest that the city should use a base rate which completely accounts for the cost of the system operations, plus a reasonable amount of water for household use and landscaping; (with an allowance for trees and gardens, as mentioned earlier) and then have a surcharge for excessive use, and an even higher rate for usage that is clearly wasteful or abusive. Under this scenario, a family could reasonably plan and know its costs, and would be encouraged to not abuse or waste this water resource, but would be encouraged to have trees, a garden, flowers and so forth. The rate paid by apartment dwellers should take into account that someone else, i.e. homeowners and the City through its parks, is paying the cost of the landscaping amenities, trees, lawns, and so forth which we all enjoy in this SUBURBAN environment. In Summary, we all know that waste is bad. Now we need to recognize that the quality of life in Englewood, in the future, will be determined by how we allow and encourage appropriate use of the water resources we own, and which we are constantly reminded that are more than adequate.
Our Conservation Plan should plan for not just water conservation, but should embrace innovative water saving technologies to “stretch” the water we can use, and should ENCOURAGE THE APPROPRIATE USE OF WATER, using our pricing mechanism to insure that we have the kind of landscaping, trees, gardens, flowers and water efficient landscaping that will “Keep Englewood Beautiful” and provide a high quality of life for our residents and businesses.

Comment 3: Page ES-1. Paragraph 3; table ES1 would seem to indicate that water used should be 70,677 AF (or are you referring to a savings?). Page 12, reference to fig 2.4; do we really charge less for more consumption? $2.04 for heavier users vs. $3.29 for lighter users …That would seem to discourage conservation. Page 15, reference to fig 2.5 should be 2.6 (or vice versa).

Comment 4: Table 2.2. Where are the Rainfall numbers from? Englewood, Watershed from where we get our water, snowpack, does it exclude our snowfall, etc.? …. I’d like to see a reference. Figure 2.5. on the Y axis it is really easy to (mentally) put a comma where there is a period in the Y values; I would recommend using the number without decimals (e.g.1000) or with only one decimal (e.g. 1000.0) …. or just use billion gallons with one decimal. Pretty amazing how water use has gone down (3 billion to 2 billion) …. Something was really done right to get this to happen! Figures 2.1 and 2.2 need to be readable (higher resolution?). Figure 2.2. Englewood Water (Mains/Lines?) over 8 inches in Diameter. I know what you mean but citizens might not.

Comment 5: I’ve attached a brochure from the City of Calgary, Alberta, that encourages residents to collect rainwater for their landscape watering. I suggest that Englewood consider this practice. Ottawa, Ontario, Convention Centre collects rainwater for toilet and urinal flushing saving 359,000 gallons per year--another practical conservation approach.

I appreciate that this is a Water Conservation Plan but I think it concentrates too much on reducing water use including punitive measures, and not enough on efficient use of the resource. I believe the plan should discuss collaboration with other City departments to achieve some of the goals. For instance working with Parks and Recreation for educational seminars and even gardens and alternative grasses for lawns, or Community Development to achieve a balance between landscaping requirements and water use.

Englewood participates in the Arbor Day Foundations Tree City program promoting a healthy urban forest. Water plays an essential part in maintaining that urban forest. The only mention of trees in the entire plan is on page 25 where it talks about removing native tree species as a way of conserving water! EMC 16-6-7 details required landscaping standards for new development and again this plan doesn’t really address the water use issues presented by these City requirements.

Public education is an essential element if this plan is to succeed, but aside from the Pipeline publication, while widely distributed I suspect isn’t widely read, there seems to
be little else. In fact, according to Page 27 Xeriscape education is left to Denver Water. While the Water Day for school children is a laudable program, it is the parents who make most of the water use decisions I would hate to see Englewood buried in mountains of crushed rock simply because it requires less water.

Comment 6: Every toilet that is in an Englewood controlled building should be modified or replaced with low usage ones,,fire stations, police buildings , court houses ,,,,Englewood. Public buildings,etc ,,all !

Comment 7: “Water Conservation Plan” Will we keep the code below? It does not require all flat rate customers to be updated. Is that correct?

“The Englewood Municipal Code includes a requirement for all flat-rate customers to install approved water meters when they sell or transfer their property. The Code states: “All owners of property having unmetered water service shall be required to install approved water meter within ninety (90) days after the sale or transfer of the property or change in property use from residential to commercial or industrial. Whenever a meter is to be installed, it shall be supplied by the Englewood Utilities Department at the owners cost.”

Comment 8: After reading Mr. Woullard's article in the Hub regarding water conservation, it really peaked my interest as I am one of the 10,00[0] plus homes on a water meter.

I understand there are 2,074 single family dwellings under the flat rate system, and I am sure several of these homeowners are trying to conserve water. However, there are a percentage of these homes that are taking advantage of this system. I have a neighbor that will use one of the fountain type sprinklers. They will set it in one spot in the morning and it will still be in the same spot in the afternoon. When confronted as to why they would do such a thing there comment is "we don't care we don't pay for water." In addition I drive S. Logan to Belleview to and from work every week. There are a few houses where the water is on in the afternoons prior to 6:00 pm. I do not know whether these homes are metered or on the flat rate system, either way they should not be watering during the heat of the day.

My opinion is that all single family dwellings should have a meter installed sooner than later.
2013 ENGLEWOOD WATER CONSERVATION PLAN
COMMENTS AND RESPONSES

The City of Englewood has completed its 60-day public review period for the water conservation plan that began on May 1, 2013 through July 1, 2013. Official notification was posted in the Englewood Herald (copy attached). During the pre-approval period, three newspaper articles were published; an article in the Denver Post, Your Hub dated May 29, 2013, “Englewood creates water conservation plan, seeks input,” an article in the Coyote Gulch dated May 1, 2013, “Englewood rolls out draft water conservation plan #CO drought,” and an article in the Englewood Herald dated April 26, 2013, “Water plan awaits comment.” A complete copy of the plan was available at Englewood Civic Center and on the City’s website. During the public-review period, the City received eight comments on the plan.

The following is a list of the comments, summary of the core issues conveyed in the public comments, and Englewood’s response.

COMMENTS:

Comment 1: I strongly recommend that everyone involved with the water conservation plan be required to read "Rainwater Harvesting for Drylands and Beyond Vol. 1-3" by Brad Landcaster. I would also like to see the city use more xeriscaping around city facilities. It's baffling why you have lawn around places like the WTP, city maintenance facility, Police station, etc. The only person who ever sets foot on those expanses of grass are the people who mow them, truly a waste of water and maintenance. Allow and implement the use of greywater. Give incentives for xeriscaping. Limit the amount of grass for new homes and businesses and require the use of low water usage grasses. Go to a mandatory 3 day a week watering schedule all of the time.

RESPONSE:

Xeriscape Programs and Measures
Several comments requested the incorporation of xeriscape programs and incentives. The City did consider xeriscape programs during the initial screening of potential conservation measures and programs. Based on the City’s screening criteria (1. staff time, 2. financial implications and 3. political ramifications), the City does not currently
have the staff resources to implement xeriscape programs and did not feel the programs merited putting money into it. The City will re-evaluate xeriscape measures and programs with future water conservation planning efforts. Englewood residents are encouraged to utilize xeriscape landscape.

Comment 2: Water is the staff of life.....we all know that. We cannot do without it and our quality of life, particularly here in the dry Western Desert, depends upon the availability of good, clean water. I am sure that is why our civic leaders in Englewood worked so hard to obtain water rights for Englewood—to insure that our quality of life would remain high because we had enough water. In the 1970’s, Englewood had a “flat rate” water billing system. We paid in advance, and the city had a stable, absolutely predictable fund to pay the cost of providing water. Our lawns and neighborhoods were green and inviting. The name “Englewood” seemed to describe our green urban forest. Now we have water meters and we sell our “excess” water to more affluent neighborhoods. The rationale for this was that by selling our excess water, Englewood would have plenty and our rates would stay lower than surrounding cities. Unfortunately, this hasn’t worked out. Denver rates right now are $2.59/1000 gallons plus $6.33 admin fee; Englewood’s rate is $3.29/1000 gallons plus a $9.71 admin fee. If you use 10,000 gallons in a billing period you pay $4.26/1000 gallons in Englewood, vs $3.22/1000 gallons in Denver. As just a side note, if you are one of Englewood’s “out of city” metered customers, you only pay an admin fee of $9.22. So much for the theory of “sell off our water and pay less for the water we use.”

Over the past several decades, as Englewood’s water policy has moved from a flat rate predictable cost to a metered cost, Englewood’s neighborhoods have consistently declined in appearance. Certainly a big part of that has been the fact that bluegrass lawns are water guzzlers and have become very expensive to maintain under the current water pricing system, and as you drive through the city you can see numerous homes with dead or abandoned lawns, but also fewer gardens and more neglected trees. No rational person is going to suggest that we encourage bluegrass lawns, or running water in the gutter. But our policies are not encouraging APPROPRIATE WATER USE to Keep Englewood Beautiful. As the appearance of our neighborhoods continues its decline, so does the desire to live here, raise a family, participate in civic affairs, and so forth. Our water policies have contributed to this decline even though we seem to have enough water to take a more enlightened approach, saving water appropriately, but encouraging water use that keeps Englewood an attractive, livable city. It is vexing to me that Englewood’s neighborhoods can’t afford the water that we are selling to other, more affluent metro neighborhoods to waste on THEIR lawns and green space, which they seem to do with reckless abandon, even to the point, in Highlands Ranch, of penalizing homeowners who do not use enough water on their lawns. Obviously, they have recognized that people want to live and do business in a city which has visually appealing trees, landscaping, and so forth. We apparently haven’t figured that out, even though we already have the water resources. Obviously, the cost of water is a much small part of a family’s budget in a more affluent
community than it is in less affluent Englewood. So I see nothing in the proposed Water Conservation Plan to encourage the APPROPRIATE USE of the water Englewood owns to improve the quality of the appearance and livability of the City of Englewood, taking into account that our city is not as affluent as some of our Southern neighbors. For instance, Englewood’s development guidelines require trees, and our Concrete Replacement plan requires replacement trees when a tree is removed next to a sidewalk. But our water conservation plan gives no thought to the cost or effort involved in owning a tree, or the water required. Trees are an expensive addition to a homeowner’s landscape. They require watering, maintenance, insurance, trimming, and probably eventual expensive removal. I guess a “conservation minded” citizen should simply do without trees. But can you imagine Englewood without trees? Certainly the “wood” part refers to our attractive urban forest. I imagine the growing number of apartment dwellers in Englewood feel that their water rate should be lower, after all they don’t have trees, or grass or gardens, or flowers to tend, water and maintain. So it seems to me that Englewood homeowners should not be disadvantaged when compared to apartment dwellers, or to homeowners in more affluent areas to whom Englewood sells water. While a homeowner will probably use more water, much of that will to enhance the urban landscape, providing trees and landscaping which enhances all of our quality of life. There is clearly a benefit to the community provided by homeowners who invest in trees and appropriate landscaping, and a water conservation program should recognize this benefit and encourage trees through water pricing. Tree ownership should not be mandated by the City, and then immediately penalized by Englewood’s water pricing policy. Similarly, some thought should be given to the social and community benefit provided by a homeowner who has a flower or vegetable garden, enhancing the beauty of the neighborhood and the livability of the urban landscape. These gardens should be encouraged, not penalized by water pricing when compared to the person who only plants a water guzzling bluegrass lawn. Again, isn’t it curious that the City of Englewood is now subsidizing a community garden for people (apartment dwellers) who cannot have their own garden, but gives no break to the homeowner who owns, pays taxes on, and provides his own garden area. Additionally, it is curious that this “Conservation Plan” doesn’t seem to encourage, or even to allow some innovative conservation techniques, such as grey water systems, rain barrels, low flow toilets, and so forth. Grey water systems should be encouraged when appropriately designed and installed. There is no good reason why bathing or hand washing water cannot be used again for toilet flushing before it passes back into the sanitary sewer system. This does not affect the amount of water available for re-introduction back into the river as treated effluent, but will reduce the amount needed to operate a household. Similarly, cisterns designed to catch and use rainwater for garden or lawn, or household use should be encouraged and allowed. It is curious that Englewood “claims” that runoff rain water creates a storm drainage burden that must be remediated through a tax, but will not allow a homeowner to catch and use that rainwater, thereby eliminating this storm drainage burden. Homeowners should be encouraged to use low flow toilets, low flow showerheads, drip irrigation for flowerbeds and gardens; if not through a rebate program then at least through an education program, classes, product recommendations, and so forth. Some considerable thought should be given to the problems faced by a family trying to plan a family budget and the effects of a constantly
changing water bill which seems to be out of their control. A family should be able to predict its water bill with some certainty, even through periods of drought. I suggest that the city should use a base rate which completely accounts for the cost of the system operations, plus a reasonable amount of water for household use and landscaping; (with an allowance for trees and gardens, as mentioned earlier) and then have a surcharge for excessive use, and an even higher rate for usage that is clearly wasteful or abusive. Under this scenario, a family could reasonably plan and know its costs, and would be encouraged to not abuse or waste this water resource, but would be encouraged to have trees, a garden, flowers and so forth. The rate paid by apartment dwellers should take into account that someone else, i.e. homeowners and the City through its parks, is paying the cost of the landscaping amenities, trees, lawns, and so forth which we all enjoy in this SUBURBAN environment In Summary, we all know that waste is bad. Now we need to recognize that the quality of life in Englwood, in the future, will be determined by how we allow and encourage appropriate use of the water resources we own, and which we are constantly reminded that are more than adequate. Our Conservation Plan should plan for not just water conservation, but should embrace innovative water saving technologies to “stretch” the water we can use, and should ENourage THE APPROPRIATE USE OF WATER, using our pricing mechanism to insure that we have the kind of landscaping, trees, gardens, flowers and water efficient landscaping that will “Keep Englewood Beautiful” and provide a high quality of life for our residents and businesses.

RESPONSE:

See prior response on “Xeriscape Programs and Measures”.

Water Rates
There were several comments provided regarding water rates. One comment suggested that the City should use a base rate which accounts for the cost of the system operations, plus a reasonable amount of water for household use and landscaping; (with an allowance for trees and gardens) and then have a surcharge for excessive use, and an even higher rate for usage that is clearly wasteful or abusive. Incorporated into the conservation plan is a future water rate study. The study will consider all of the elements of this comment and determine if any changes need to be made to Englewood’s current water rate structure.

Public Education
A couple of comments were provided regarding public education. Based on the City’s screening criteria (1. staff time, 2. financial implications and 3. political ramifications), the City does not currently have the staff or financial resources to devote to educational classes. However, the plan includes educational kits, public education through newsletter, bill stuffers and the city website, online access to water bill and history and distribution of ET irrigation scheduling in water bill. The City will re-evaluate education measures and programs with future water conservation planning efforts.
Comment 3: Page ES-1. Paragraph 3; table ES1 would seem to indicate that water used should be 70,677 AF (or are you referring to a savings?). Page 12, reference to fig 2.4; do we really charge less for more consumption? $2.04 for heavier users vs. $3.29 for lighter users ...That would seem to discourage conservation. Page 15, reference to fig 2.5 should be 2.6 (or vice versa).

RESPONSE:

A comment was made regarding the fact that Englewood’s current rate structure charges less per 1,000 gallons for water consumption over 400,000 gallons. The current rate structure recognizes that large users, as a class, do not contribute to the peaking cost of the system as much as the smaller users. It is unlikely that residents will reach the 400,000 gallon threshold. As mentioned previously, a future water rate study will evaluate the current water rates and determine if any changes need to be made to Englewood’s current water rate structure.

Comment 4: Table 2.2. Where are the Rainfall numbers from? Englewood, Watershed from where we get our water, snowpack, does it exclude our snowfall, etc.? .... I’d like to see a reference. Figure 2.5. on the Y axis it is really easy to (mentally) put a comma where there is a period in the Y values; I would recommend using the number without decimals (e.g.1000) or with only one decimal (e.g. 1000.0) ..... or just use billion gallons with one decimal. Pretty amazing how water use has gone down (3 billion to 2 billion) ..... Something was really done right to get this to happen! Figures 2.1 and 2.2 need to be readable (higher resolution?). Figure 2.2. Englewood Water (Mains/Lines?) over 8 inches in Diameter. I know what you mean but citizens might not.

RESPONSE:

The rainfall numbers come from the National Weather Service out of Denver International Airport. Other recommended corrections are being taken into consideration.

Comment 5: I’ve attached a brochure from the City of Calgary, Alberta, that encourages residents to collect rainwater for their landscape watering. I suggest that Englewood consider this practice. Ottawa, Ontario, Convention Centre collects rainwater for toilet and urinal flushing saving 359,000 gallons per year--another practical conservation approach.
I appreciate that this is a Water Conservation Plan but I think it concentrates too much on reducing water use including punitive measures, and not enough on efficient use of the resource. I believe the plan should discuss collaboration with other City departments to achieve some of the goals. For instance working with Parks and Recreation for educational seminars and even gardens and alternative grasses for lawns, or Community Development to achieve a balance between landscaping requirements and water use.

Englewood participates in the Arbor Day Foundations Tree City program promoting a healthy urban forest. Water plays an essential part in maintaining that urban forest. The only mention of trees in the entire plan is on page 25 where it talks about removing native tree species as a way of conserving water! EMC 16-6-7 details required landscaping standards for new development and again this plan doesn’t really address the water use issues presented by these City requirements.

Public education is an essential element if this plan is to succeed, but aside from the Pipeline publication, while widely distributed I suspect isn’t widely read, there seems to be little else. In fact, according to Page 27 Xeriscape education is left to Denver Water. While the Water Day for school children is a laudable program, it is the parents who make most of the water use decisions I would hate to see Englewood buried in mountains of crushed rock simply because it requires less water.

RESPONSE:

Rainwater Harvesting and Graywater Reuse

There were a couple of comments made regarding rainwater harvesting and incorporating the practice into this plan. Capturing rainwater is an ongoing issue in Colorado, and it is not allowed if it will injure vested water rights. For the most part, Colorado law does not allow homeowner to collect or use rainwater runoff from roofs unless their only source of water is a well on the property.

In 2009, however, the Colorado State Legislature passed two laws that carve out exemptions from the general rule. The first law says that if you are not served by a domestic water system and you are located in a designated ground water basin or your collection system qualifies as exempt from 37-92-602(1)(g)(l), you are allowed to capture rainwater for household, fire protection, stock watering and irrigation of up to one acre of lawns and gardens as long as it is applied to uses specified in the well permit that applies to your property. The second law allows the State to participate in a study of 10 new developments to determine the impact of capturing rainwater on streams, rivers and tributary groundwater.

Additionally a couple of comments were made regarding graywater reuse. The term “graywater” means discharges from bathroom and laundry room sinks, bathtubs, showers, laundry machines and other sources authorized by the Colorado Water Quality Control Commission. In May 2013, the Colorado General Assembly passed House Bill 1044, which authorized the use of graywater. The majority of Englewood’s
water rights do not allow for reuse, particularly if that reuse involves further consumption of the water.

See prior response, “Xeriscape Programs and Measures.”

Comment 6: Every toilet that is in an Englewood controlled building should be modified or replaced with low usage ones fire stations, police buildings, court houses Englewood Public buildings, etc. all!

RESPONSE:

City Building Fixtures
A comment was made that every toilet that is in an Englewood controlled building should be modified or replaced with low usage toilets. Currently, as new toilets and fixtures are needed in City buildings, low water use fixtures are used as a replacement.

Comment 7: “Water Conservation Plan” Will we keep the code below? It does not require all flat rate customers to be updated. Is that correct?

RESPONSE:

Metering
The Englewood Municipal Code includes a requirement for all flat-rate customers to install approved water meters when they sell or transfer their property. The Code states: All owners of property having unmetered water service shall be required to install approved water meter within ninety (90) days after the sale or transfer of the property or change in property use from residential to commercial or industrial. Whenever a meter is to be installed, it shall be supplied by the Englewood Utilities Department at the owners cost.

Comment 8: After reading Mr. Woullard’s article in the Hub regarding water conservation, it really peaked my interest as I am one of the 10,000 plus homes on a water meter.

I understand there are 2,074 single family dwellings under the flat rate system, and I am sure several of these homeowners are trying to conserve water. However, there are a percentage of these homes that are taking advantage of this system. I have a neighbor that will use one of the fountain type sprinklers. They will set it in one spot in the
morning and it will still be in the same spot in the afternoon. When confronted as to why they would do such a thing there comment is "we don't care we don't pay for water." In addition I drive S. Logan to Belleview to and from work every week. There are a few houses where the water is on in the afternoons prior to 6:00 pm. I do not know whether these homes are metered or on the flat rate system, either way they should not be watering during the heat of the day.

My opinion is that all single family dwellings should have a meter installed sooner than later.

RESPONSE:

See prior response, “Metering.”
**Mandatory Watering Schedule**
A resident requested that Englewood go to a mandatory three-day-a-week watering schedule on a permanent basis. While this may be necessary during a water shortage or drought, the City felt that a mandatory three-day-a-week watering schedule is not necessary to reach its water conservation goals.

**Xeriscape Programs and Measures**
A couple of comments requested the incorporation of Xeriscape programs and incentives. The City did consider Xeriscape programs during the initial screening of potential conservation measures and programs. Based on the City's screening criteria (1. staff time, 2. financial implications and 3. political ramifications), the City does not currently have the staff resources to implement Xeriscape programs and did not feel the programs merited putting money into it. The City will re-evaluate Xeriscape measures and programs with future water conservation planning efforts. Englewood residents are encouraged to utilize Xeriscape landscape.

**Turf and Landscape Restrictions/Standards for New Construction**
One comment requested that Englewood limit the amount of grass for new homes and businesses and require the use of low water usage grasses. Englewood staff considered turf and landscape restrictions/standards for new construction. Based on the City's screening criteria (1. staff time, 2. financial implications and 3. political ramifications), the City decided to re-evaluate new constructions restrictions and standards with future water conservation planning efforts.

**Mandatory Watering Schedule**
A resident requested that Englewood go to a mandatory three-day-a-week watering schedule on a permanent basis. While this may be necessary during a water shortage or drought, the City felt that a mandatory three-day-a-week watering schedule is not necessary to reach its water conservation goals.

**Water Rates**
There were several comments provided regarding water rates. One comment suggested that the City should use a base rate which accounts for the cost of the system operations, plus a reasonable amount of water for household use and landscaping; (with an allowance for trees and gardens) and then have a surcharge for excessive use, and an even higher rate for usage that is clearly wasteful or abusive. Incorporated into the Conservation Plan is a water rate study. The study will consider all of the elements of this comment and determine if any changes need to be made to Englewood’s current water rate structure.
One resident was concerned that the City Code regarding the conversion of flat-rate customers to metered customers was changing to require flat-rate customers to install meters. The City Code is not changing. The Englewood Meter Replacement Program (EMAP) discussed in the Plan is voluntary. EMAP takes the difference between what the customer pays for the non-metered rate and what the customer would pay for the metered rate and uses that money to help pay the cost of installing the water meter. If provided a grant by the CWCB, Englewood would like to expand upon their current program by providing 50 to 100 meters at no cost to the customer while the customer continues to pay the flat rate charges, as further incentive for meter replacement. If the customer converts, the money received by the City would go to providing a meter for another flat rate customer.

The City would like to respond to an inaccuracy regarding Englewood’s water rates as compared to Denver’s water rates. The comment states that Denver rates are $2.59/1000 gallons plus $6.33 admin fee; Englewood’s rate is $3.29/1000 gallons plus a $9.71 admin fee. According to the resident, if you use 10,000 gallons in a billing period you pay $4.26/1000 gallons in Englewood, vs $3.22/1000 gallons in Denver. However, the calculation did not consider that Denver Water bills monthly while Englewood bills on a quarterly basis. If we examine a scenario in which one uses 10,000 gallons per month for a three-month period, an Englewood resident would pay $3.61/1,000 gallons as compared to $3.22/1,000 gallons in Denver.

A comment was made regarding the fact that Englewood’s current rate structure charges less per 1,000 gallons for water consumption over 400,000 gallons. The current rate structure is an incentive for industry and large water users and it is unlikely that residents will reach the 400,000 gallon threshold. As mentioned previously, a water rate study will evaluate the current water rates and determine if any changes need to be made to Englewood’s current water rate structure.

**Rainwater Harvesting and Graywater Reuse**

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Additionally a couple of comments were made regarding graywater reuse. The term “graywater” means discharges from bathroom and laundry room sinks, bathtubs, showers, laundry machines and other sources authorized by the Colorado Water Quality Control Commission. In May 2013, the Colorado General Assembly passed House Bill 1044, which authorized the use of graywater. The majority of Englewood’s water rights do not allow for reuse, particularly if that reuse involves further consumption of the water.

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City Building Fixtures
A comment was made that every toilet that is in an Englewood controlled building should be modified or replaced with low usage toilets. Currently, as new toilets and fixtures are needed in City buildings, low water use fixtures are used as a replacement.
### Water Rate Comparison *

**Englewood Vs. Denver**

*Based on:
- Single-family residential
- Size ¾ inch meter

**Assumptions:**
- 120,000 Gal Total Annual Consumption
- 8,000 Gal per month for 9 months
- 16,000 Gal per month for 3 months (Summer)

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<th>Category (Average Month)</th>
<th>ENGLEWOOD</th>
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**Assumptions:**
- 150,000 Gal Total Annual Consumption
- 10,000 Gal per month for 9 months
- 20,000 Gal per month for 3 months (Summer)

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<td>Service Charge</td>
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BY AUTHORITY

ORDINANCE NO. ______ SERIES OF 2013
COUNCIL BILL NO. 37
INTRODUCED BY COUNCIL MEMBER WOODWARD

AN ORDINANCE AMENDING TITLE 16, CHAPTERS 5 AND 11 PERMITTING DISTILLERIES, BREWERIES AND WINERIES IN THE CITY OF ENGLEWOOD.

WHEREAS, in 2012 the Englewood Planning and Zoning Commission heard requests for a new brewery and separately heard of plans for a new distillery, which was not allowed under the current Unified Development Code; and

WHEREAS, the State licenses and regulates these industries but the Englewood Planning and Zoning Commission, the Englewood Liquor Authority and the City Council hereby find that the State has not pre-empted the City of Englewood’s Home Rule powers relating to the zoning of these industries; and

WHEREAS, there was consensus from the Englewood Planning and Zoning Commission to research these industries and consider Code amendments to facilitate new business development; and

WHEREAS, the Englewood Planning and Zoning Commission recommended that City Council approve an ordinance to allow distilleries and clarify language on breweries and wineries and allow distilleries, breweries and wineries as Permitted Uses in I-1 and I-2 districts and as Conditional Uses in the M-2, MU-B-1 and MU-B-2 Districts as long as the businesses are limited in size and designed to encourage pedestrian traffic with such activities as tap rooms, retail sales, tours, etc.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ENGLEWOOD, COLORADO, AS FOLLOWS:

Section 1. The City Council of the City of Englewood, Colorado hereby authorizes amending Title 16, Chapter 5, Section 1, Subsection C, entitled Table of Allowed Uses of the Englewood Municipal Code 2000, to read as follows:
16-5-1(C): *Table of Allowed Uses.*

**TABLE 16-5-1.1: TABLE OF ALLOWED USES**

- **P = PERMITTED USE**
- **C = CONDITIONAL USE**
- **A = ACCESSORY USE**
- **T = TEMPORARY USE**
- **L = LIMITED USE**
- **C-A = ACCESSORY USE APPROVED CONDITIONALLY**
- **L-A = ACCESSORY USE APPROVED WITH LIMITED USE PROCEDURE**

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[EDITORS NOTE: 16-5-1.1 RESIDENTIAL USES contains no changes and is therefore not included here]

[EDITORS NOTE: 16-5-1.1 PUBLIC/INSTITUTIONAL USES contains no changes and is therefore not included here]
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<td>Assembly</td>
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<td>Studio</td>
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|                                            | Car wash, auto detailing                                  | L | L | L | L | 16-5-2.C.6
<p>|                                            |                                                         |   |   |   |   | 16-5-2.C.4 |
|                                            | Commercial storage of                                    | P | P | P | P | 16-5-2.C.3 |</p>
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[EDITOR'S NOTE: 16-5-1.1 ACCESSORY USES contains no changes and is therefore not included here]

[EDITOR'S NOTE: 16-5-1.1 TEMPORARY USES contains no changes and is therefore not included here]

[EDITOR’S NOTE: 16-5-1.1 USES NOT MENTIONED contains no changes and is therefore not included here]
Section 2. The City Council of the City of Englewood, Colorado hereby authorizes amending Title 16, Chapter 5, Section 2, Subsection C, by the addition of a new Paragraph 14 entitled "Breweries, Distilleries and Wineries," of the Englewood Municipal Code 2000, to read as follows:

[EDITORS NOTE: 16-5-2(C)(1) through (13) contains no changes and is therefore not included here]

16-5-2: Use-Specific Standards.

C. Commercial Uses.


a. Within the M-2, MU-B-1 and MU-B-2 districts, these uses shall be permitted only in conjunction with a restaurant, tavern, retail sales or sales room located on the same premises as the manufacturing of the beverage.

b. Within the M-2, MU-B-1 and MU-B-2 districts, these uses shall not exceed 10,000 square feet of gross floor area.

c. An on-premises sales room may be a part of the principle use as long as the floor area utilized for the sales room is less than or equal to thirty percent (30%) of the total floor area of the facility or one thousand square feet (1,000), whichever is greater, subject to State and Federal regulations.

d. These uses may include the sale of food for consumption on the premises, subject to State Liquor Code requirements.

e. These uses shall be designed and operated in such a manner so as not to create nuisance impacts on surrounding uses.

Section 3. The City Council of the City of Englewood, Colorado hereby authorizes amending Title 16, Chapter 11, Section 1, Subsection F(9) of the Englewood Municipal Code 2000, to read as follows:

[EDITORS NOTE: 16-11-1(A) through (F)(8) contains no changes and is therefore not included here]

16-11-1: USE CLASSIFICATIONS.

F. Commercial Uses.

9. Food and Beverage Service.

a. Characteristics. This category includes establishments, for example, restaurants, cafes, coffee shops, bars, taverns, and any food/beverage sales establishments, which sell food for on- or off-premise consumption. Accessory uses may include
decks and patios for outdoor seating, drive-through facilities, customer and employee parking areas, and valet parking facilities.

b. Specific Use Types. This category includes the following use types:

(1) Caterer. A service consisting of preparation and delivery of food and beverages for off-site consumption, without provision for on-site pickup or consumption.

(2) Microbrewery. A facility for the production and packaging of beer fermented on the premises for distribution, retail, or wholesale on or off the premises. The volume of beer production of such facility shall not exceed 12,000 barrels of beer per year.

(3) (2) Restaurant, Bar, Tavern (with or without outdoor operations). A retail establishment where the principal business is the sale of food and beverages in a ready-to-consume state. This use type includes lunch counters and refreshment stands selling prepared food and drinks for immediate consumption. Operations may include outdoor seating areas or outdoor food service, subject to all applicable use and development standards set forth in this Title.

(4) (3) Restaurant, with Drive-Through Service. An eating/drinking establishment in which the principal business is the sale of foods or beverages to the customer in a ready-to-consume state and in which the design or method of operation of all or any portion of the business allows food or beverages to be served directly to the customer in a motor vehicle without the need for the customer to exit the motor vehicle.

(5) (4) Take Out and Delivery Only. An eating/drinking establishment, generally without patron seating, that provides food and/or beverages to be delivered or to be picked typically for consumption off the premises of such establishment.

(6) (5) Brew Pub. A restaurant that included the brewing of beer as an accessory use. The volume of beer production of such facility shall not exceed two thousand four (2,400) barrels per year. A retail establishment that manufactures not more than seventy-four thousand (74,000) gallons (2,400 barrels) of malt liquor or fermented malt beverages on its licensed premises, each calendar year.
Section 4. The City Council of the City of Englewood, Colorado hereby authorizes amending Title 16, Chapter 11, Section 1, Subsection G(2)(b) and (c) of the Englewood Municipal Code 2000, to read as follows:

G. Manufacturing/Industrial Uses.

2. Manufacturing, Including Processing, Fabrication, or Assembly.

   a. Characteristics. Industrial establishments involved in the manufacturing, processing, fabrication, packaging, or assembly of goods. Natural, man-made, raw, secondary, or partially completed materials may be used in the manufacturing process. Products may be finished or semi-finished and are generally made for the wholesale market, for transfer to other plants, or to order for firms or consumers. Such uses may also include industries furnishing labor in the case of the refinishing of manufactured articles. Custom industry is included (e.g., establishments primarily engaged in the on-site production of goods by hand manufacturing involving the use of hand tools and small-scale equipment). Goods are generally not displayed or sold on site, but if so, they are a subordinate part of total sales. Relatively few customers come to the manufacturing site. Accessory activities may include limited retail sales, offices, cafeterias, parking, employee recreational facilities, warehouses, storage yards, repair facilities, truck fleets, and caretaker’s quarters.

   b. Specific Use Types. This category includes the following use types:

      (1) Brewery: Any establishment, licensed by the appropriate State and Federal authorities, where malt liquors or fermented malt beverages are manufactured, except brew pubs as defined. Or, as this definition may be modified in C.R.S. 12-47-103.

      (2) Distillery: Any establishment, licensed by the appropriate State and Federal authorities where spirituous liquors are manufactured. Or, as this definition may be modified in C.R.S. 12-47-103.

      (3) Sales Room: An establishment, or portion of a manufacturing establishment, that allows customers to taste samples of wine, beer or spirituous liquors manufactured or produced by a single distillery, brewery or winery and licensed as a sales room pursuant to a State Manufacturer’s License (C.R.S. 12-47-402) or a State Limited Winery License (C.R.S. 12-47-403). A sales room may include the sale of such products in addition to related items, marketing events, special events entertainment and/or food. Or, as this definition may be modified in C.R.S. 12-47-103 et. seq.
(4) **Vintner's Restaurant:** A retail establishment, licensed by the appropriate State and Federal authorities, that sells food for consumption on the premises and that manufactures not more than two hundred fifty thousand (250,000) gallons of wine on its premises each year.

(5) **Winery:** Any establishment licensed by the appropriate State and Federal authorities, where vinous liquors are manufactured, except that the term does not include a Vintner's Restaurant licensed pursuant to 12-47-420 C.R.S. Or as this definition may be modified in C.R.S. 12-47-103.

(6) **Manufacturing, Light:** Manufacturing uses that do not involve the generation outside the property of noise, odor, vibration, dust, or hazard. Examples include, but are not limited to: assembly of pre-fabricated parts, manufacture of electric, electronic, or optical instruments or devices; manufacture and assembly or artificial limbs, dentures, hearing aids, and surgical instruments; manufacture, processing, and packing of food products, cosmetics, and manufacturing of components, jewelry, clothing, trimming decorations, and any similar item.

(7) **Manufacturing, Heavy:** Manufacturing uses that may involve the generation outside the property of noise, odor, vibration, dust or hazard. Examples include, but are not limited to: refining or initial processing of raw materials, rolling, drawing, or extruding of metals; and log decking, storage, and ponding.

(c) **Exceptions.** The manufacturing, processing, fabrication, or assembly of the following items is prohibited:

1. Abrasives, basic manufacture;
2. Alcoholic distillation;
3. Animal by-products, basic manufacture and processing;
4. Asphalt, manufacture and processing;
5. Automobile shredding, crushing, baling, compacting and similar operations;
6. Biological waste, processing;
7. Bone black, basic manufacture;
8. Carbon black or lamp black, basic manufacture;
Charcoal, basic manufacture;

Chemicals, heavy or industrial, basic manufacture or processing;

Cinder and cinder blocks, basic manufacture or processing;

Coal or coke, manufacture or processing;

Concrete and concrete products, manufacture or fabrication;

Detergents, soaps and by-products, using animal fat, basic manufacture;

Fermented fruits and vegetable products, manufacture;

Fertilizers, manufacture or processing;

Fungicides, manufacture;

Gasses, other than nitrogen and oxygen, manufacture;

Glass manufacture;

Glue and size, manufacture;

Grain milling;

Graphite, manufacture;

Gypsum and other forms of plaster base, manufacture;

Insecticides, manufacture;

Insulations, flammable types, manufacture or fabrication;

Matches, manufacture;

Meat slaughtering;

Metal shredding and similar operations;
(29 27) Metals, extraction or smelting;

(30 28) Metals, ingots, pigs, sheets, or bars, manufacture;

(31 29) Oils and fats, animal and vegetable, manufacture;

(32 30) Paints, pigments, enamels, japans, lacquers, putty, varnishes, whiting, and wood fillers, manufacture or fabrication;

(33 31) Paper pulp and cellulose, basic manufacture;

(34 32) Paraffin, manufacture;

(35 33) Petroleum and petroleum products, manufacture or processing;

(36 34) Portland and similar cements, manufacture;

(37 35) Rubber, manufacture, or reclaiming;

(38 36) Sawmill or planing mills;

(39 37) Serums, toxins, viruses, manufacture;

(40 38) Sugars and starches, manufacture;

(41 39) Tannery;

(42 40) Turpentine, manufacture;

(43 41) Wax and wax products, manufacture; and

(44 42) Wood preserving by creosoting or other pressure impregnation of wood by preservatives.

Section 5. The City Council of the City of Englewood, Colorado hereby authorizes amending Title 16, Chapter 11, Section 2, Subsection B(2), “Definition of Words, Terms, and Phrases”, of the Englewood Municipal Code 2000, by inserting in alphabetical order to read as follows

16-11-2: Definition of Words, Terms, and Phrases.

B. Definition of Words, Terms, and Phrases.
Beer: An alcoholic beverage made by brewing and fermentation from cereals, usually malted barley, and flavored with hops and the like for a slightly bitter taste. Beer shall not contain greater than 6% alcohol by volume, otherwise it shall be classified as a "spirituous liquor". Or, as this definition may be modified in C.R.S. 12-47-103.

Brewery: Any establishment, licensed by the appropriate State and Federal authorities, where malt liquors or fermented malt beverages are manufactured, except brew pubs as defined. Or, as this definition may be modified in C.R.S. 12-47-103.

Distillery: An establishment, licensed by the appropriate State and Federal authorities, where spirituous liquors are manufactured. Or, as this definition may be modified in C.R.S. 12-47-103.

Microbrewery: A facility for the production and packaging of beer fermented on the premises for distribution, retail, or wholesale on or off the premises. The volume of beer production of such facility shall not exceed 12,000 barrels of beer per year. See definition of "Food and Beverage Service."

Sales Room: An establishment, or portion of a manufacturing establishment, that allows customers to taste samples of wine, beer or spirituous liquors manufactured or produced by a single distillery, brewery or winery and licensed as a sales room pursuant to a State Manufacturer's License (C.R.S. 12-47-402) or a State Limited Winery License (C.R.S. 12-47-403). A sales room may include the sale of such products in addition to related items, marketing events, special events entertainment and/or food. Or, as this definition may be modified in C.R.S. 12-47-103 et. seq.

Vintner's Restaurant: A retail establishment, licensed by the appropriate State and Federal authorities, that sells food for consumption on the premises and that manufactures not more than two hundred fifty thousand (250,000) gallons of wine on its premises each year.

Winery: Any establishment, licensed by the appropriate State and Federal authorities, where vinous liquors are manufactured, except that the term does not include a Vintner's Restaurant licensed pursuant to 12-47-420 C.R.S. Or as this definition may be modified in C.R.S. 12-47-103.

Section 5. Safety Clauses. The City Council hereby finds, determines, and declares that this Ordinance is promulgated under the general police power of the City of Englewood, that it is promulgated for the health, safety, and welfare of the public, and that this Ordinance is necessary for the preservation of health and safety and for the protection of public convenience and welfare. The City Council further determines that the Ordinance bears a rational relation to the proper legislative object sought to be obtained.
Section 6. Severability. If any clause, sentence, paragraph, or part of this Ordinance or the application thereof to any person or circumstances shall for any reason be adjudged by a court of competent jurisdiction invalid, such judgment shall not affect, impair or invalidate the remainder of this Ordinance or its application to other persons or circumstances.

Section 7. Inconsistent Ordinances. All other Ordinances or portions thereof inconsistent or conflicting with this Ordinance or any portion hereof are hereby repealed to the extent of such inconsistency or conflict.

Section 8. Effect of repeal or modification. The repeal or modification of any provision of the Code of the City of Englewood by this Ordinance shall not release, extinguish, alter, modify, or change in whole or in part any penalty, forfeiture, or liability, either civil or criminal, which shall have been incurred under such provision, and each provision shall be treated and held as still remaining in force for the purposes of sustaining any and all proper actions, suits, proceedings, and prosecutions for the enforcement of the penalty, forfeiture, or liability, as well as for the purpose of sustaining any judgment, decree, or order which can or may be rendered, entered, or made in such actions, suits, proceedings, or prosecutions.

Section 9. Penalty. The Penalty Provision of Section 1-4-1 EMC shall apply to each and every violation of this Ordinance.

Introduced, read in full, and passed on first reading on the 5th day of August, 2013.

Published by Title as a Bill for an Ordinance in the City's official newspaper on the 9th day of August, 2013.

Published as a Bill for an Ordinance on the City's official website beginning on the 7th day of August, 2013 for thirty (30) days.

A Public Hearing was held on August 19, 2013.

Read by title and passed on final reading on the 3rd day of September, 2013.

Published by title in the City's official newspaper as Ordinance No. __, Series of 2013, on the 6th day of September, 2013.

Published by title on the City's official website beginning on the 4th day of September, 2013 for thirty (30) days.
This Ordinance shall take effect thirty (30) days after publication following final passage.

Randy P. Penn, Mayor

ATTEST:

Loucrishia A. Ellis, City Clerk

I, Loucrishia A. Ellis, City Clerk of the City of Englewood, Colorado, hereby certify that the above and foregoing is a true copy of the Ordinance passed on final reading and published by title as Ordinance No. ____, Series of 2013.

Loucrishia A. Ellis
BY AUTHORITY

ORDINANCE NO. SERIES OF 2013
COUNCIL BILL NO. 43
INTRODUCED BY COUNCIL MEMBER GILLIT

AN ORDINANCE SUBMITTING TO A VOTE OF THE REGISTERED ELECTORS OF THE CITY OF ENGLEWOOD AT THE NEXT SCHEDULED MUNICIPAL ELECTION A QUESTION REGARDING OFFICIAL DESIGNATION OF PARK PROPERTY WITHIN THE CITY OF ENGLEWOOD.

WHEREAS, on August 7th an initiative petition was submitted to the City Clerk’s Office; and

WHEREAS, the Englewood Home Rule Charter and State Statutes provide that this matter be forwarded to the Englewood City Council after the City Clerk certifies the validity and sufficiency of such initiative petition; and

WHEREAS, the Englewood City Clerk has certified the validity and sufficiency of the signatures for the initiative petition; and

WHEREAS, the City must own property or have the consent of the owner to dedicate the property as a park; and

WHEREAS, Hosanna is owned by Arapahoe School District No. 1; and

WHEREAS, the District has not consented to dedication; and

WHEREAS, Council Bill No. 35, Series of 2013 was passed earlier on the agenda selling the Englewood Depot; and

WHEREAS, the Englewood Home Rule Charter Section 46 does not allow alteration of the initiative petition language to clarify the Hosanna and Depot properties.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ENGLEWOOD, COLORADO, THAT:

Section 1. It has been determined that this initiated ordinance shall be enacted without alterations as provided for in Section 46, of the Englewood Home Rule Charter.

Section 2. There is hereby submitted to the registered electors of the City of Englewood at the next scheduled municipal election on November 5, 2013 a proposed ballot question regarding official designation of Park property in the City of Englewood, to read as follows:

Question No.
Shall the Englewood Municipal Code of the City of Englewood, Colorado be amended to include official designation of Park property within the City of Englewood in order to protect the people of Englewood and their right to vote on the sale of Park property by: dedicate as “Park” any property identified on 2006 Englewood Parks and Recreation Master Plan as a Park including but not limited to: Baker, Barde, Bates-Logan, Bellview, Centennial, Clarkson, Cushing, Depot, Duncan, Emerson, Hosanna, Jason, Miller Fields, Romans and Rotolo?

_____ Yes  _____ No

Section 3. Each elector voting at said election and desirous of voting shall indicate his/her choice by depressing the appropriate counter of the voting machine or by the appropriate marking upon paper ballots where used.

Section 4. The proper officials of the City of Englewood shall give notice of said next scheduled municipal election, such notice shall be published in the manner and for the length of time required by law, and the ballots cast at such election shall be canvassed and the result ascertained, determined, and certified as required by law.

Section 5. Only if the question is approved by the registered electors of the City of Englewood shall the Englewood Municipal Code be amended.

Section 6. If any section, paragraph, clause, or other portion of this Ordinance is for any reason held to be invalid or unenforceable, the invalidity or unenforceability shall not affect any of the remaining portions of this Ordinance.

Introduced, read in full, and passed on first reading on the 19th day of August, 2013.

Published by Title as a Bill for an Ordinance in the City’s official newspaper on the 23rd day of August, 2013.

Published as a Bill for an Ordinance on the City’s official website beginning on the 21st day of August, 2013 for thirty (30) days.

Read by title and passed on final reading on the 3rd day of September, 2013.

Published by title in the City’s official newspaper as Ordinance No. ___, Series of 2013, on the 6th day of September, 2013.
Published by title on the City’s official website beginning on the 4th day of September, 2013 for thirty (30) days.

ATTEST:

Randy P. Penn, Mayor

Loucrishia A. Ellis, City Clerk

I, Loucrishia A. Ellis, City Clerk of the City of Englewood, Colorado, hereby certify that the above and foregoing is a true copy of the Ordinance passed on final reading and published by title as Ordinance No. ___, Series of 2013.

Loucrishia A. Ellis
COUNCIL COMMUNICATION

Date: September 3, 2013
Agenda Item: 11 c i
Subject: Resolution regarding the adoption of the Englewood Light Rail Corridor Plan as a Supplementary Planning Document in Support of Roadmap Englewood: The 2003 Englewood Comprehensive Plan

Initiated By: Community Development Department
Staff Source: Alan White, Community Development Director

COUNCIL GOAL AND PREVIOUS COUNCIL ACTION

Potential infrastructure and planning project submittals for inclusion in the 2012-2017 Transportation Improvement Plan were presented to Council at the September 25th, 2010 City Council Budget meeting. Council directed staff to proceed with preparation of the Englewood, Oxford, and Bates Station Area Master Plan application through the adoption of a resolution at the October 4th, 2010 City Council meeting.

City Council entered into an intergovernmental agreement with the Regional Transportation District (RTD) to conduct the Englewood, Oxford, and Bates Station Area Master Plan at the February 6th, 2012 City Council meeting. City Council passed a motion to approve a contract with private consulting firm Crandall Arambula at the June 4th, 2012 City Council meeting.

Community Development staff held study sessions with City Council to report on project progress at the October 29th, 2012 City Council study session, and to go over the draft Englewood Light Rail Corridor Plan document at the June 3rd, 2013 City Council study session.

City Council held a public hearing on the Englewood Light Rail Corridor Plan at the August 19th, 2013 regular City Council meeting.

RECOMMENDED ACTION

Staff recommends that Council approve a Resolution to adopt the Englewood Light Rail Corridor Plan as a supplementary planning document in support of Roadmap Englewood: The 2003 Englewood Comprehensive Plan.

BACKGROUND, ANALYSIS, AND ALTERNATIVES IDENTIFIED

The Englewood Light Rail Corridor Plan project was funded through a station area planning grant from the Denver Regional Council of Governments (DRCOG). The light rail system represents a major capital investment for both the federal government and DRCOG. DRCOG has established a policy to encourage station area intensification including increased employment and housing in order to increase light rail system ridership, decrease highway congestion, and improve air quality.
Stakeholder and General Public Notification

A total of 1,312 letters were sent to all addresses within a half mile radius of each of the three stations. A total of 705 letters were sent to absentee landlords owning property within the half mile study area radius. A total of 3,850 postcards were sent to all addresses outside the study area to resident and businesses as far east as Logan Street for Bates Station, Sherman Street for Englewood Station, and Cherokee Street for Oxford Station. The total number of mailings was 5,867. Commercial brokers with property listings within the study area were contracted via email through the CoStar commercial listing service.

Meeting Dates

Project consultant Crandall Arambula traveled to Denver to hold four sets of meetings for stakeholders and the general public on August 8th, September 27th, and November 29th, 2012, and February 27th, 2013.

Planning Process Methodology

Project consultant Crandall Arambula conducted an analysis of existing land use and transportation patterns and developed a forecast for regional housing and employment demand over a twenty year time period, for the purpose of creating a number of development scenarios for the Englewood, Oxford, and Bates station influence areas. The initial scenarios were presented to stakeholders and the general public for their comments and preferences. The project consultant made a series of refinements to a preferred scenario for each station area, and then began to combine the individual station scenarios into a single, system-wide development scenario, presenting the changes to stakeholders and the general public through the course of two additional meetings.

The final land use scenario should not be construed as a rigid development pattern to be enforced by the City, but should rather be seen as a likely development pattern based on transit-oriented real estate development principles and optimal market conditions, to be conducted by private sector property owners and real estate developers over time. The City's involvement in the development of the area is restricted to investments in public infrastructure and zoning regulations. It is City Council policy that eminent domain powers will not be exercised for the purpose of acquiring private property with the intent to convey said properties to private developers within the light rail station areas.

Englewood Station Preferred Scenario

The corridor plan recognizes the Englewood Station area as the station with the most overall growth potential due to its excellent visibility and access from US Highways 85 and 285. The final plan scenario calls for the development of a Floyd Avenue extension to the west underneath the light rail tracks and Santa Fe Drive and over the South Platte River in order to open up a significantly sized, under-utilized area for transit-oriented housing redevelopment. The plan also calls for significant intensification of the area immediately surrounding the station in the form of housing developments above existing park-n-Ride facilities, as well as the development of a hotel next to the station platform. Finally, the plan calls for the eventual transformation of the areas east of the immediate station area (Inca Street to Broadway), centered around a park block corridor that would create a highly attractive amenity drawing office, retail, and housing demand, structured in a more urban format.

Oxford Station Preferred Scenario

The corridor plan projects the Oxford Station area as primarily residential in nature due to its relative lack of visibility and lower level of access. Relatively larger properties that are closest to the existing station are
identified as being the most attractive candidates for housing redevelopment over the long term. Relatively smaller properties that are beyond a quarter mile radius from the station have less redevelopment potential, and are identified as areas where a mix of existing employment and small housing projects may occur. Retail use is projected to be minimal at this location, but may possibly develop directly across from the station at the northeast corner of Oxford and Windermere. The corridor plan recommends the development of park amenities on both sides of Oxford Avenue that will help attract a mix of housing types that include up-scale rental and condo units. Without such park amenities, the project consultant believes that the area will not attract condo or up-scale rental units. Due to comments made by area stakeholders that favored the development of off-street station parking for light rail riders, the project consultant identified potential sites for park-n-Ride facilities north and south of Oxford Avenue.

Bates Station Preferred Scenario

The plan for Bates Station concedes that a future station may not be developed. Nevertheless, the consultant took care to develop a plan that does not preclude development of a station in the future, and advises that an easement be established for future station access. The project consultant reviewed past plans for the site and concluded that the planned employment and retail uses were not viable. The project consultant plan calls for a strictly multi-unit residential development of the General Iron Works and Winslow Crane properties, with townhome developments creating a buffer between the General Iron Works/Winslow properties and the existing residential neighborhood to the east. The proposed plan for this area is viable with or without a light rail station.

Pedestrian and Bicycle Connection Improvements

In order to facilitate pedestrian and bicycle access to the stations, the plan calls for a rail trail featuring bridges over Dartmouth, Hampden, and Oxford Avenues parallel to the light rail line, creating a continuous connection from Bates Station down to the Big Dry Creek Trail. The plan also calls for the development of protected bikeways along Dartmouth, Oxford, and Englewood Parkway to the east, and the new Floyd extension to the west. Protected bikeways have been recognized to significantly increase bicycle commuting as they provide a significant measure of physical separation from automobile traffic that makes people feel much safer and more confident.

Conformance with Roadmap Englewood: The 2003 Englewood Comprehensive Plan

The Englewood, Oxford, and Bates Station areas are prominently highlighted in the vision laid out in Roadmap Englewood: The 2003 Englewood Comprehensive Plan. The comprehensive plan vision recognizes the attractiveness of these areas for intensive redevelopment over time. The following goals from the comprehensive plan are supportive of the Englewood Light Rail Corridor Plan:

Regional Cooperation Goal 3

Develop a range of urban centers that will serve as transit origins and destinations that support retail, employment, and housing, and contain higher densities than average that encourage pedestrian-oriented travel.

Housing Goal 3

Encourage a regional jobs/housing balance in order to reduce vehicle miles traveled, traffic congestion, and commuting times, and improve air quality.
Parks and Open Space Goal 5

Provide a balanced and connected system of open lands, natural areas, recreation facilities, parks, trails, and greenbelts.

Parks and Open Space Goal 6

Integrate planning for parks and open space in the land use, housing, transportation, environmental, economic, and cultural plans for the city.

Business and Employment Goal 5

Recognize the unique characteristics and associated opportunities for enhancing the value of Englewood’s commercial, industrial, and mixed-use districts.

Transportation Goal 1

Enhance both the mobility and the accessibility of the transportation system.

Transportation Goal 3

Recognize and enhance the relationships between land use and the transportation system.

Transportation Goal 4

Promote a quality of life transportation philosophy that seeks to create an environmentally attractive, pedestrian-friendly community.

Environmental Quality Goal 5

Conserve energy and improve air quality.

Environmental Quality Goal 7

Preserve and enhance environmentally sensitive lands and restore brownfield properties.

Next Steps

City Council adoption of the Englewood Light Rail Corridor Plan is critical to the successful application to DRCOG for the award of additional ‘Next Steps’ planning funding for station area master plans. The Englewood Light Rail Corridor Next Steps Study will explore key implementation project design and feasibility in greater detail in order to seek future construction funding for these projects.

FINANCIAL IMPACT

The Englewood Light Rail Corridor Plan project was funded by federal Congestion and Air Quality Mitigation (CMAQ) funds for planning projects that DRCOG reserved for Station Area/Urban Center plans and studies. The City committed a total of $30,000 in order to leverage $120,000 in federal funds for a project total of $150,000. Adoption of the Englewood Light Rail Corridor Plan as a supplementary City
planning policy document in support of Roadmap Englewood: The 2003 Englewood Comprehensive Plan will not obligate the City to provide additional City funding for projects identified in the plan.

LIST OF ATTACHMENTS

Planning and Zoning Commission Findings of Fact
Planning and Zoning Commission July 16th, 2013 Public Hearing Minutes
Resolution
IN THE MATTER OF CASE #2012-06
FINDINGS OF FACT, CONCLUSIONS
AND RECOMMENDATIONS RELATING
TO THE ENGLEWOOD LIGHT RAIL
CORRIDOR PLAN

INITIATED BY:
Community Development Department
1000 Englewood Parkway
Englewood, CO 80110

Commission Members Present: Bleile, Brick, King, Knoth, Roth, Fish, Welker, Townley, Kinton

Commission Members Absent: None

This matter was heard before the City Planning and Zoning Commission on July 16, 2013 in the City Council Chambers of the Englewood Civic Center.

Testimony was received from staff and the public. The Commission received notice of Public Hearing, the Staff Report, and a copy of the proposed Light Rail Corridor Plan which were incorporated into and made a part of the record of the Public Hearing.

After considering the statements of the witnesses and reviewing the pertinent documents, the members of the City Planning and Zoning Commission made the following Findings and Conclusions.

FINDINGS OF FACT

1. THAT the Public Hearing on Case #2012-06, Englewood Light Rail Corridor Plan, was brought before the Planning and Zoning Commission by the City of Englewood Community Development Department.

2. THAT notice of the Public Hearing was published on the City of Englewood website from June 26, 2013 through July 16, 2013. The notice was also published in the Englewood Herald on July 5, 2013.

3. THAT stakeholders and members of the general public who attended plan development meetings were notified of the Public Hearing directly by email.
4. THAT City Council entered into an Intergovernmental Agreement with the Regional Transportation District to develop a light rail station area master plan in February of 2012.

5. THAT project kickoff notices were mailed to 5,867 residences and businesses within approximately three quarters of a mile from the existing Englewood and Oxford Stations and the potential Bates Station.

6. THAT four sets of meetings were held by project consultant Crandall Arambula with the purpose of crafting a preferred land use and transportation network scenario for the Englewood light rail corridor.

7. THAT the Englewood Light Rail Corridor Plan conforms to the vision, goals, and objectives outlined in Roadmap Englewood: The 2003 Englewood Comprehensive Plan.

8. THAT Planning and Zoning Commission and City Council study sessions were held to review the development and final draft of the Englewood Light Rail Corridor Plan.

CONCLUSIONS

1. THAT the Public Hearing on Case #2012-06, Englewood Light Rail Corridor Plan, was brought before the Planning and Zoning Commission by the City of Englewood Community Development Department.

2. THAT notice of the Public Hearing was published on the City of Englewood website from June 26, 2013 through July 16, 2013. The notice was also published in the Englewood Herald on July 5, 2013.

3. THAT the Plan supports taking advantage of opportunities for growth along the Englewood industrial corridor through a strong urban mix of land uses.

4. THAT the Plan recognizes the value of park land through the identification of the Englewood Parkway/Floyd Avenue park block scheme and the Oxford Station parks.

5. THAT the Plan promotes transportation through the development of key mobility infrastructure projects.

6. THAT the Plan will lead to the cleanup of Brownfield properties and create and enhance community connections.

7. THAT the Englewood Light Rail Corridor Plan conforms to Roadmap Englewood: 2003 Englewood Comprehensive Plan, specifically:

9. **THAT** the Englewood Light Rail Corridor Plan be forwarded to City Council with a favorable recommendation.

**DECISION**

**THEREFORE,** it is the decision of the City Planning and Zoning Commission that Case #2012-06 Englewood Light Rail Corridor Plan be referred to City Council with a favorable recommendation.

The decision was reached upon a vote on a motion made at the meeting of the City Planning and Zoning Commission on July 16, 2013, by Mr. Roth, seconded by Mr. Knoth, which motion states:

**THAT CASE #2012-06, THE ENGLEWOOD LIGHT RAIL CORRIDOR PLAN BE FORWARD TO CITY COUNCIL WITH A FAVORABLE RECOMMENDATION**

**AYES:** Bleile, Roth, King, Fish, Brick, Knoth, Welker, Townley, Kinton  
**NAYS:** None  
**ABSTAIN:** None  
**ABSENT:** None

Motion carried.

These Findings and Conclusions are effective as of the meeting on July 16, 2013.

**BY ORDER OF THE CITY PLANNING & ZONING COMMISSION**

__________________________  
John Brick, Chair
CALL TO ORDER

The regular meeting of the City Planning and Zoning Commission was called to order at 7:00 p.m. in City Council Chambers of the Englewood Civic Center, Chair Brick presiding.

Present: Bleile, Roth, King, Welker, Knoth, Fish, Brick, Kinton, Townley, Freemire (alternate)

Absent: None

Staff: Alan White, Community Development Director
      Chris Neubecker, Senior Planner
      John Voboril, Planner II

APPROVAL OF MINUTES

July 2, 2013

Mr. Fish moved:
Mr. Kinton seconded: TO APPROVE THE July 2, 2013 MINUTES

Chair Brick asked if there were any modifications or corrections.

Mr. Fish noted that on pages 2, 3, and 4 the name “Calonder” should be “Townley.”
The Minutes were approved as amended.

AYES: Bleile, Roth, Welker, Knoth, Fish, King, Brick, Kinton, Townley
NAYS: None
ABSTAIN: None
ABSENT: None

Motion carried.
III. APPROVAL OF FINDINGS OF FACT
Case #2012-05
Distilleries, Breweries and Wineries

Mr. Roth moved: TO APPROVE THE FINDINGS OF FACT FOR CASE #2012-05, DISTILLERIES, BREWERIES AND WINERIES
Mr. King seconded:

Chair Brick asked if there were any modifications or corrections. There were none.

AYES: Bleile, Roth, Welker, Knoth, Fish, King, Brick, Kinton, Townley
NAYS: None
ABSTAIN: None
ABSENT: None

Motion carried.

IV. PUBLIC HEARING
Case #2012-06
Englewood Light Rail Corridor Plan

Mr. Bleile moved: TO OPEN THE PUBLIC HEARING FOR CASE #2012-06, ENGLEWOOD LIGHT RAIL CORRIDOR PLAN
Mr. Kinton seconded:

AYES: Bleile, Roth, Welker, Knoth, Fish, King, Brick, Kinton, Townley
NAYS: None
ABSTAIN: None
ABSENT: None

Motion carried.

John Voboril, Long Range Planner II, was sworn in. Mr. Voboril stated proof of publication from the Englewood Herald and the City’s website had been received. Suggested findings were presented to the Commission.

A brief discussion on the background was provided.
Planning and Zoning Commission
Study Session or Public Hearing
Case #2012-06
Case #2013-04
July 16, 2013

- The Light Rail Corridor Plan (Plan) was funded by a grant from the Denver Regional Council of Governments (DRCOG). The light rail system represents a major capital investment for both the federal government and DRCOG. DRCOG established policy to encourage station area intensification including increased employment and housing in order to increase light rail system ridership, decrease highway congestion, and improve air quality.

- The opening of the Southwest Light Rail Line spurred redevelopment along the Corridor, and currently a second phase of redevelopment is occurring.

- The City recognized other uses for the grant, including pedestrian crossings, bicycle connections, and parking which are currently deficient.

- Public participation was accomplished by mailing notices to 5,867 residences and businesses within .75 miles of all three stations. From that mailing, there were 50 stakeholders, who are people who own property within the planning areas for the Plan. In addition, there were 96 participants who were not in the planning areas that participated in general meetings.

- Four public meetings were held to develop the vision and goals; develop and review land use scenarios; refine and review the preferred combined scenario; and to review the Plan.

- Mr. Voboril provided a brief synopsis of the proposed major projects for each station area.

  **Englewood Station:** The Plan calls for extending Floyd Avenue; intensifying projects adjacent to the station; and redevelopment and intensification along Englewood Parkway.

  **Oxford Station:** Identified projects include Park-n-Ride sites; housing redevelopment; and two new parks.

  **Bates Station:** The Plan acknowledges the station may never be developed. The Plan does recommend obtaining an easement for a potential, future station. Land uses envisioned are multi-unit residential.

Circulation projects identified include the rail trail (the top project); protected bikeways; and extension and improvements of the Southwest Greenbelt Trail.

- The Light Rail Plan is in conformance with the goals and objectives of the Comprehensive Plan, particularly:
The Plan supports these goals by calling for taking advantage of opportunities for growth along the Englewood industrial corridor through a strong urban mix of land uses. Further, the Plan recognizes the value of park land through the identification of the Englewood Parkway/Floyd Avenue park block scheme and the Oxford Station parks. The Plan promotes the transportation goals through the development of key mobility infrastructure projects. Realization of the development called for in the Plan will shift significant amounts of daily trips from cars to mass transit and pedestrian/bicycle modes. Additionally, it will lead to the cleanup of Brownfield properties and create and enhance community connections.

Mr. Voboril responded to questions from the Commission. The areas included in the Plan are zoned either industrial or Planned Unit Development (PUD). Existing single family developments are a non-conforming use within the industrial district. Meetings with the major employers in the plan area are still in the works. The benefit of the Plan for citizens is better access to the stations; increased property values; and more business.

The Plan is a visionary plan for 30 years, and is a very fluid document. The planning process is just beginning. Future steps include applying for additional funding from DRCOG to conduct a Next Steps Study; considering the feasibility of some of the projects; conducting regulatory planning and reforms.

Chair Brick set forth the parameters of public testimony.

Michael Sroczynski, 3755 South Jason Street, was sworn in. Mr. Sroczynski testified that he is an Englewood business owner and is concerned about the cost of implementing the Plan. He expressed unease over mixing residential with industrial, and fears that industrial businesses will be eliminated. Mr. Sroczynski enumerated various items within the Plan that he believes will never happen.
Zealand Peterson, business owner of 3975 South Lipan Street, was sworn in. Mr. Peterson expressed concern about the proposed changes which will eliminate a large area of industrial work and whether eminent domain would be utilized.

Dave Campbell, business owner of 3778 South Kalamath Street, was sworn in. Mr. Campbell believes the industrial businesses are being placed in a corner and is concerned about the future of his businesses if the Plan is approved.

Christopher Diedrich, property owner of 2946 South Bannock Street, was sworn in. Mr. Diedrich testified regarding the items within the Plan that he supports and opposition to other parts of the Plan. The younger generation desires living close to grocery stores, eateries, walking or biking to/from work and good paying jobs.

James Veno, property owner of 3297 and 3325 South Santa Fe, was sworn in. Mr. Veno testified he is attempting to redevelop his properties, and access is always the issue. Mr. Veno stated a project timeline would be extremely beneficial; it would assist business owners in planning their business’ future.

Jennifer Henninger of the City of Sheridan Planning Department was sworn in. Ms. Henninger thanked the City for including the City of Sheridan in the process. The process was very thorough and Sheridan is in support of the proposed connections.

John Spedding business owner at 3330 South Platte River Drive was sworn in. Mr. Spedding testified he favors the Plan; the Platte River is a good place to redevelop. He expressed interest in whether the City would provide relocation assistance to businesses affected by the Plan.

Jonathan Bush, owner of the former Martin Plastic building, was sworn in. Mr. Bush endorsed the Plan. He applauded the efforts of the City in planning for its future. He further testified that communities that thrive have mixed uses.

Alan White, Director of Community Development, was sworn in. Mr. White provided the following testimony:

- The Plan sets the stage for the City’s long-term future. The Plan will be revisited as conditions change.
- The Plan provides ideas for capital improvements and setting the foundation for future zoning changes. This Plan does not rezone property; that will be a separate process which will involve the Commission and the public.
- It is not the City’s intent to force out any businesses.
• Under industrial zoning, residential uses are not permitted. A Planned Unit Development (PUD) rezoning is the only current avenue in which to permit residential in an industrial district. The process is lengthy and costly.
• “Redevelopment of existing or privately held commercial properties will primarily occur through private transactions between willing buyers and sellers.” “Further, it is the policy of the Englewood City Council to not use eminent domain powers for the purpose of redevelopment within the Light Rail Corridor.” Whenever a business wishes to relocate or sell, the transaction will be between the willing buyer and seller – not the City.
• The controversy around the West Corridor Line was due to RTD acquiring right-of-way for the rail line, parking, and platforms. City of Englewood already has those right-of-ways; further the line and stations are already built.
• Any existing business or use would be permitted under any new zoning regulations. New standards would apply to new development.
• The public notification process for the Plan included mailing out over 5,000 postcards. From that mailing, a distribution list was developed for those registered to receive continuing communication. Updates were provided on the City’s website, which linked to an outside project website. Also, an article was in the Englewood Citizen. Regarding the public hearing, emails or letters were sent to those registered; the meeting was also posted in the Englewood Herald and on the City’s website.
• If the Plan is adopted by City Council, the foundation is in place to implement zoning changes with public input. It also provides direction on future capital improvement projects and direction to future developers. All meetings are open to the public.

Mr. Fish moved:
Mr. Bleile seconded: TO CLOSE THE PUBLIC HEARING FOR CASE #2012-06, ENGLEWOOD LIGHT RAIL CORRIDOR PLAN

AYES: Bleile, Roth, Welker, Knoth, Fish, King, Brick, Kinton, Townley
NAYS: None
ABSTAIN: None
ABSENT: None

Motion carried.
Mr. Roth moved;  
Mr. Knoth seconded: THAT CASE #2012-06, THE ENGLEWOOD LIGHT RAIL PLAN BE FORWARDED TO CITY COUNCIL WITH A FAVORABLE RECOMMENDATION

Discussion points included:

- The Plan is a building block and a method of moving forward.
- The City must balance not alienating existing businesses and planning for the City’s future.
- Accessibility to the stations, businesses, and parks needs to be universal
- The Comprehensive Plan will be updated over the next couple of years, which may or may not incorporate all the ideas of the Light Rail Corridor Plan.
- The goal is to make a viable, healthy community that embraces change through a long-term visionary plan.
- The Plan does not address buffering between existing businesses and new development. There is no discussion on the impacts to residential areas caused by overly tall development. The employment and development standards limit the height to 8 stories; Mr. Roth stated he believes that limitation should also be placed on residential, retail and commercial development standards.
- Mr. Roth put forth a statement he wished to have included in the Plan.

Mr. Roth offered a friendly amendment; Mr. Knoth did not accept.

Mr. Roth moved:  
Mr. Brick seconded: TO AMEND THE MOTION TO INCLUDE:

1. Extending the height standards for up to eight story structures to the residential, retail, and commercial development standards in addition to the current employment development standards.

2. Adding the following statement to the Plan: “There are numerous homes in Englewood situated on the hillside along the upper eastern bank area of the South Platte River. These properties have historically enjoyed panoramic views of the mountains to the west and many of these homes were constructed to take advantage of those views. A significant portion of their property value derives from those views. Development in these areas has the potential to create a wall blocking those views. This is due to the
proposed proximity of the areas in the Plan as well as the fact that the rail line runs along the western border of the City. Height restrictions on development in these areas are needed to protect those views.”

There was no discussion. Chair Brick called for the vote on the Amendment.

Mr. Fish voted no; the character and nature of the Plan is visionary. Details will be discussed in the future.

Mr. Knoth voted no; concurring with Mr. Fish.

Mr. Welker voted no; it is not the appropriate time to include details. Details will be discussed during zoning changes.

Mr. Kinton voted no; concurring with Messrs. Fish and Welker.

Mr. Roth voted yes. It is an important part of the vision.

Ms. Townley voted no; preserving the view sheds for the residence in that area is important, but she is not comfortable determining that height limit at this time. It needs to be studied further.

Mr. Bleile voted yes; protection of view sheds is an important part of a vision statement.

Mr. King voted no; the views should be protected and believes it is already accomplished within the current Plan. The matter will be addressed at a later time.

Chair Brick voted yes; it is good to set the standard early.

AYES: Bleile, Brick Roth
NAYS: Welker, Knoth, Fish, King, Kinton, Townley
ABSTAIN: None
ABSENT: None

Motion failed.

Discussion on the original motion continued:

- The underlying tenets of the Plan are well constructed.
- Concern was expressed on the Plan not including single family residential.
- It is important to nurture the industrial district; it could be a larger job creator.
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July 16, 2013

- As a visionary document, the Plan is a starting point which will be implemented incrementally. It is an opportunity to start a dialogue with business owners.
- The Plan is only a cornerstone of a lengthy process, but it provides a starting point.
- Currently redevelopment can occur around the stations through assembling land and creating a PUD.

With no further discussion Chair Brick called for the vote on the original motion.

Mr. Fish voted yes; the Plan is in conformance with the Englewood Comprehensive Plan. The Plan extends and provides more detail in a number of areas. The Commission has no power to protect any business; it only provides recommendations to City Council.

Mr. Knoth, Mr. Welker, Mr. Kinton, Mr. Roth, Ms. Townley, Mr. Bleile, and Mr. King voted yes.

Chair Brick voted yes; the Plan enumerates various items within the Englewood Comprehensive Plan.

AYES: Bleile, Roth, Welker, Knoth, Fish, King, Brick, Kinton, Townley
NAYS: None
ABSTAIN: None
ABSENT: None

Motion carried.

V. STUDY SESSION
Case #2013-04
Home Occupations

It was the consensus of the Commission to reschedule the Study Session to August 6, 2013.

VI. PUBLIC FORUM
There was no public who wished to address the Commission.

VII. ATTORNEY'S CHOICE
Ms. Reid was not present.
VIII. STAFF’S CHOICE
The Home Occupation Study Session will be held on August 6, per the Commission’s request. Chair Brick stated there may be a desire to discuss Ms. Reid’s memo on PUD precedence at that meeting as well.

IX. COMMISSIONER’S CHOICE

Mr. Bleile encouraged the public to participate, enter into a dialogue with the City, and attend meetings. He thanked the audience for attending and providing testimony. The other Commissioners echoed the same comments.

Mr. Freemire suggested Ms. Reid provide a legal opinion regarding protected views and eminent domain based on Colorado case law.

Ms. Townley stated there will be another opportunity to provide testimony when the Plan proceeds to City Council.

Chair Brick thanked the Commissioners and staff for their productivity and efficiency.

Mr. Roth conveyed that the Urban Renewal Authority is currently reviewing development proposals for the Acoma parcel.

The meeting adjourned at 9:30 p.m.

Nancy G. Fenton, Recording Secretary
RESOLUTION NO. ______
SERIES OF 2013

A RESOLUTION APPROVING THE ADOPTION OF THE “ENGLEWOOD LIGHT RAIL CORRIDOR PLAN” AS A SUPPLEMENTARY PLANNING DOCUMENT IN SUPPORT OF “ROADMAP ENGLEWOOD: The 2003 ENGLEWOOD COMPREHENSIVE PLAN”.

WHEREAS, potential infrastructure and planning project submittals for inclusion in the 2012-2017 Transportation Improvement Plan were presented to Council in 2010; and

WHEREAS, an intergovernmental agreement with the Regional Transportation District (RTD) to conduct the Englewood, Oxford, and Bates Station Area Master Plan was approved by the passage of Resolution No. 83, Series of 2012; and

WHEREAS, the Englewood City Council approved by motion a contract with the private consulting firm Crandall Arambula in June 2012 for this Plan; and

WHEREAS, the Englewood Light Rail Corridor Plan project was funded through a station area planning grant from the Denver Regional Council of Governments (DRCOG); and

WHEREAS, the light rail system represents a major capital investment for both the federal government and DRCOG; and

WHEREAS, DRCOG has established a policy to encourage station area intensification including increased employment and housing in order to increase light rail ridership, decrease highway congestion, and improve air quality; and

WHEREAS, a Public Hearing on this Plan was held by the Englewood City Council on August 19, 2013 as required.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF ENGLEWOOD, COLORADO, THAT:

Section 1. The City Council of the City of Englewood, Colorado, hereby approves the adoption of the Englewood Light Rail Corridor Plan, attached hereto, as a Supplementary Planning Document in Support of Roadmap Englewood: The 2003 Englewood Comprehensive Plan.

ADOPTED AND APPROVED this 3rd, day of September, 2013.

ATTEST: ___________________________
Randy P. Penn, Mayor

Loucrishia A. Ellis, City Clerk
I, Loucrishia A. Ellis, City Clerk for the City of Englewood, Colorado, hereby certify the above is a true copy of Resolution No. _____, Series of 2013.

Loucrishia A. Ellis, City Clerk
The Englewood Light Rail Corridor Plan is a vision of what the future may hold for the redevelopment of the corridor over the next twenty years. The plan is based on analysis of existing conditions, potential economic demand in the future, and knowledge of the development history of transit systems in other metropolitan cities in the United States.

The implementation measures (primarily planning studies, engineering, marketing, and investments in physical infrastructure) identified in the plan will be initiated by the City of Englewood in coordination with the private development sector through public-private partnerships.

Redevelopment of existing, privately-held commercial properties will primarily occur through private transactions between willing buyers and sellers.

It is the policy of the Englewood City Council to not use eminent domain powers for the purpose of redevelopment within the light rail corridor.
ACKNOWLEDGEMENTS

Englewood City Council
Randy Penn
Mayor, District 3
Jim Woodward
Mayor Pro Tem, At Large
Rick Gillit
District 4
Joe Jefferson
District 1
Bob McCaslin
At Large
Linda Olson
District 2
Jill Wilson
At Large

Englewood City Manager
Gary Sears

Project Managers
Bill Sirois
RTD Senior Manager of Transit-Oriented Development
John Voboril
COE Community Development, Long Range Planner II

Technical Advisory Committee
Patrick McLauglin
RTD, Transit-Oriented Development Associate
Brad Calvert
DRCOG, Senior Planner
Bob Sears
The Greenway Team Inc., Principal
Mike Flaherty
COE City Manager’s Office, Deputy City Manager
Alan White
COE Community Development, Director
Harold Stitt
COE Community Development, Senior Planner
Jerrell Black
COE Parks and Recreation, Director
John Collins,
COE Police, Police Chief
Tom Brennan
COE Utilities, Engineer IV
Dave Henderson
COE Public Works, Engineering/Capital Projects Administrator
Ladd Vostry
COE Public Works, Traffic Engineer

Steering Committee
Jim Woodward
Englewood City Council, Mayor Pro Tem
Linda Olson
Englewood City Council, District 2
Tom Burns
COE Urban Redevelopment Authority, Former City Council Member and Mayor
Don Roth
COE Planning and Zoning Commission
Chad Knoth
COE Planning and Zoning Commission
Peter Smith
Englewood Transportation Advisory Committee
Tom O’Connor
Englewood School Board, 2nd Vice President
Judy Browne
Englewood Housing Authority, Commissioner
Jonathan Bush
Littleton Capital Partners, Principal
Bryant Winslow
Winslow Crane, Vice President of Finance
Dennis Witte
Omni Development Corporation, President
Lee Means
Craig Hospital, Director of Engineering/ES
Taylor Vaughn
Weingarten Realty, Leasing Agent

Consultant Team
Crandall Arambula PC, Prime Consultant
George Crandall
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Don Arambula
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Jason Graf
Associate Principal/Project Coordinator
Jessie Maran
Associate Principal
Brenda Payne
Senior Urban Designer

Bill Lee Land Economics
Bill Lee
Principal
Tanya Chiranakhon
Consulting Senior Associate

URS Corporation
Mark Shaefer
Principal
Jonathan Hausman
Senior Transportation Engineer
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EXECUTIVE SUMMARY
OVERVIEW

This station area master plan is a coordinated planning effort between the City of Englewood, the Denver Regional Council of Governments (DRCOG) and the Regional Transportation District (RTD) to encourage transit supportive development. The plan was funded through the DRCOG Transportation Improvement Program and the City of Englewood.

ABOUT THE PROJECT

The Englewood Light Rail Corridor Plan project provides for unified high-quality development of the three-station corridor. It identifies the complementary functions, character, uses, and design elements for each station area and the public infrastructure necessary to link the corridor to the surrounding context.

The Plan includes an implementation strategy that identifies the most effective steps toward building projects that are consistent with the City of Englewood Comprehensive Plan and identifies the policy and regulatory adjustments needed to support Transit-Oriented Development (TOD). A primary implementation objective is to strengthen existing desirable uses and identify new economic development opportunities.

The three station areas were planned concurrently in order to efficiently utilize limited planning funds, avoid repeating and revisiting overlapping planning issues, and ensure a cohesive master plan for the three-station corridor. The Englewood Light Rail Corridor Plan process achieved the following objectives:

- Linked the areas surrounding each station into one complementary public involvement process
- Provided development assessment scenarios specific to each station area
- Integrated the three land use and transportation frameworks into one station area master plan document
PUBLIC INVOLVEMENT

The public process was systematic, inclusive, and complete. Public outreach consisted of direct mailings, newsletters, and e-mails. A project website and Facebook page provided those who were not able to attend meetings direct access via the internet to all project materials and presentations throughout the extent of the planning effort. A series of four public engagement sessions were facilitated at key project milestones, beginning in August of 2012 and concluding in February of 2013. Meeting sessions were held over two-day periods during which advisory committee and stakeholder meetings were held, followed by a corridor-wide community workshop, during which the general public provided assessment and indicated preferences of plan proposals. The process concluded with a presentation to City Council, during which the general public offered comment.

The meetings:

- **Session #1 (August 7 & 8, 2012)** - Examination of background information and the refinement of project objectives
- **Session #2 (September 26 & 27, 2012)** - Assessment of a range of creative and credible station area design alternatives
- **Session #3 (November 28 & 29, 2012)** - Evaluation of a preferred corridor and station area concept
- **Final Presentation (February 27, 2013)** - Presentation of the Final Plan and Implementation Strategies

PROJECT GOALS

The project goals were based upon the DRCOG METRO Vision 2035 Urban Center Goals and were supplemented with additional community-identified goals for the corridor as well as individual station areas. They were used to guide plan development, and serve as an assessment tool for all plan proposals and implementation strategies.

**METRO Vision 2035 Urban Center Goals**

- Promote density and compact development patterns
- Provide a range of housing, employment, and service opportunities
- Promote pedestrian and bicycle connections
- Create a special sense of place at the station and within the surrounding area
- Stimulate private investment

**Community Goals**

- Safe pedestrian and bicycle access
- Adequate parking for transit stations & development
- Neighborhood-serving development
- Compatible new development
- Reduce traffic impacts on neighborhoods
- Enhance parks and open spaces
- Link existing buses and shuttles to stations
MOBILITY ORIENTED DISTRICTS - BEYOND TOD

For each station area, short term redevelopment land use concepts were developed for areas adjacent to the station platform. The station’s ridershed was increased by linking the station platform to the surrounding one-mile area (a five-minute bike ride) with ‘complete streets’, where essential auto mobility and parking are maintained while active transportation modes - bicycling, walking and shuttle transit - were promoted.

This approach to station area planning, called a Mobility-Oriented District (MOD), captures potential transit patrons outside the typical TOD range and is an effective means to create a unifying connective transportation thread between the station platforms and the nearby Englewood and Sheridan neighborhoods.

THE GREEN DIVIDEND

Through implementation of the MOD, in addition to increased transit ridership, the Englewood Corridor will have a more balanced transportation ‘mode split’ where fewer and shorter neighborhood auto trips will result in a local economic stimulus. Less money is likely to be spent on gasoline and more money will be available for food, clothing, housing or other uses at local Englewood businesses.

By assuming that 25% of all trips are on bikes within a mile of the Englewood Station and 15% for Bates and Oxford Stations, the annual savings per household would be $992 and $596 respectively. Based on the projected households for Englewood (7,400 households) and Bates/Oxford Stations (5,400 households) the total annual savings for the Corridor would be roughly $10,550,000. By adding a conservative multiplier of three times the annual savings, the Englewood Corridor MOD is likely to result in a ‘green dividend’ of a $32 million dollar economic stimulus every year - local dollars that circulate again and again throughout the community.
CORRIDOR CONCEPT

Focused around the existing Englewood, Oxford and future Bates light rail stations, the Corridor is envisioned as a series of inter-related and complementary station area neighborhoods that support and strengthen each other rather than duplicating or creating competing uses. The station neighborhoods are knitted together with enhanced ‘active transportation’- pedestrian, bicycle, and transit improvements that will make it safer, quicker and more enjoyable to access transit, open space amenities, existing and future housing, jobs, and shopping destinations.

Highlights of the corridor concept are described below:

Bates-City Neighborhood North
- Totally comprised of rental apartment housing uses-no mix of uses because there is little market demand for retail or employment uses due to the isolated nature of the station and occasional odors from the waste water treatment plant
- No short term light rail station due to lack of funding; the Bates planning area has been designed to serve as an extension of Englewood Station featuring multi-unit residential development with strong pedestrian and bicycle connections to the existing Englewood station; however the Bates planning area has been designed so as not to preclude a station if funding becomes available
- Strong ‘Rail Trail’ pedestrian and bicycle transit access connection to Englewood Station; and a linkage to the existing off-street trail that connects to the South Platte River

Englewood - CityCenter and City Neighborhood West
- Two neighborhoods- one east and one west of the Santa Fe Drive/rail corridor
- The CityCenter shopping area would be redeveloped over time as a pedestrian-friendly, mixed-use, new urban center featuring significant increases in employment and residential density
- The new West neighborhood will require the complete redevelopment of existing, low density residential, auto-oriented commercial and industrial uses into transit-supportive uses; the new neighborhood would include a mix of parks, medium and high density housing, employment and neighborhood-serving small retail shops and restaurants
  - A new Floyd Avenue extension would act as a local auto traffic bypass and provide direct and safe access for pedestrians and bicycles to the transit station from the west neighborhood
  - The Englewood Station platform will be enlivened by new roadway, pedestrian, and bicycle access improvements and a redesign of the existing piazza into a multi-purpose active space anchored by a new hotel

Oxford- City Neighborhood South
- The station area would be characterized by new high density housing building upon new residential development at the former Martin Plastics site
- Redevelopment will occur at a full block scale closest to the station, or incrementally at a parcel scale, mixing with existing businesses, and generally located beyond one quarter mile from the station.
- Two neighborhood parks, one that is connected to and enlarges the City Recreation facility, and the other located along Navajo Street at Quincy Avenue

Rail Trail
- A pedestrian and bike recreation route parallel to light rail tracks from Amherst Avenue to the Big Dry Creek Trail south of Layton Avenue provides a safe and direct connection between all neighborhoods; grade separated new bridge crossings provide stress free access across major arterial roadways
- South Platte River Trail routes from Floyd and Dartmouth provide access to desirable regional recreation amenities and an existing bicycle commuting route to downtown Denver

Complete Streets
- ‘Protected bikeway’ loop along Oxford, Clarkson and Dartmouth links stations to residential neighborhoods and existing employment, commercial and school destinations
- Englewood Parkway/Girard Avenue would serve as the primary east-west local transit shuttle bus and bicycle connection between the Swedish Hospital campus and the Englewood Station. Following the completion of the Floyd Extension, the shuttle route would be extended to the west neighborhood.
CORRIDOR IMPLEMENTATION

Corridor implementation requires commitment to ‘game-changing’ public projects that trigger substantial private investment, and increase transit ridership.

The implementation projects indicated below represent station area ‘game changers’ which are the essential public projects required to stimulate significant private investment within the corridor and improve community-wide access to transit.

The return on investment ratio, corridor-wide, is likely to be significant. The INVESTMENTS and BENEFITS diagram on the right illustrates the amount of public investments ($123,750,000) that if spent, is anticipated to stimulate substantial private investment ($2,275,000,000). For every one dollar of public investment an expected eighteen and a half dollars of private investment would likely be generated.

Additionally, it is estimated that investments in public infrastructure such as the rail trail, protected bikeways, and linear park promenades will increase new transit ridership to upwards of 15,000 trips a day and the annual economic stimulus, by substituting some auto trips for walking and biking, will likely be $31.7 million a year.

<table>
<thead>
<tr>
<th>INVESTMENT AND BENEFITS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INVESTMENT</strong></td>
</tr>
<tr>
<td>• Public $ Invested</td>
</tr>
<tr>
<td>• Private $ Stimulated</td>
</tr>
<tr>
<td><strong>INVESTMENT RATIO</strong></td>
</tr>
<tr>
<td><strong>BENEFITS</strong></td>
</tr>
<tr>
<td>• New Housing 8,150 Units</td>
</tr>
<tr>
<td>• New Employment Bldg. Area 1,235,000 SF</td>
</tr>
<tr>
<td>• New Retail &amp; Comm. Bldg. Area 385,000 SF</td>
</tr>
<tr>
<td>• New Jobs (Employment &amp; Retail) 6,900 Jobs</td>
</tr>
<tr>
<td>• New Transit Ridership (20% of Trips on transit) 15,000 Trips/Day</td>
</tr>
<tr>
<td>• Annual Economic Stimulus (Corridor Wide) $31,675,000</td>
</tr>
</tbody>
</table>
DEVELOPMENT FRAMEWORK
OVERVIEW

The development framework provides for the character, type, arrangement and intensity of land uses for short and long term development within the corridor. It is based on factors that influenced the design—local demographics, a determination of station types based on the specific station areas and the fundamental real estate development requirements.

A market and demographic analysis of the station areas identified the following capacity for transit-oriented development based on historical growth trends and physical opportunities and constraints inherent within each station area.

Englewood Station
There is sufficient land in low intensity commercial or industrial use such that development within a half mile of this station need not impinge upon existing residential neighborhoods. The station has the potential to create a new Downtown Englewood with new offices, hotels, quality restaurants, pedestrian-oriented shops, and additional higher-density housing development.

Oxford Station
The market opportunity for this station area is incremental transition of an aging industrial strip into a high density residential neighborhood. In the near-term, developers will be interested in building rental apartments. Over the longer term, owner housing in the form of townhouses and condominiums will likely also be supportable if additional park and convenience retail amenities are added.

Future Bates Station
The retail commercial potential of the site is limited by the barrier created by Santa Fe Drive to the west and the RTD maintenance facility to the north, the difficulty of securing commercial frontage on Dartmouth, and the area’s walking proximity to retail and commercial uses along Broadway. The market potential here is for medium density housing, most likely rental apartments.
DEVELOPMENT FRAMEWORK

The development framework locates transit-supportive residential and employment uses that capitalize on the corridor’s open space and recreational amenities, proximity to Downtown Englewood, and the regional transit and roadway network.

The Development Framework:
- Identifies redevelopment of ‘soft parcels’ (vacant, under-utilized parcels)
- Establishes transit supportive density, form, and character of development for a 20-year planning horizon
- Suggests incremental transit-supportive infill for parcels where stable, auto-oriented uses currently exist
- Indicates primary land uses and a vertical mix of uses where economically viable
- Reflects fundamental real estate siting requirements
- Protects and supports existing land uses (existing uses can remain in place and will only redevelop with the property owner’s consent)

<table>
<thead>
<tr>
<th>LAND USE SUMMARY BY STATION NEIGHBORHOOD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BATES- CITY NEIGHBORHOOD NORTH</strong></td>
</tr>
<tr>
<td><strong>Land Use</strong></td>
</tr>
<tr>
<td>Housing</td>
</tr>
<tr>
<td>Parks/Open Space</td>
</tr>
<tr>
<td><strong>ENGLEWOOD- CITY CENTER AND CITY NEIGHBORHOOD WEST</strong></td>
</tr>
<tr>
<td><strong>Land Use</strong></td>
</tr>
<tr>
<td>Housing</td>
</tr>
<tr>
<td>Hotel</td>
</tr>
<tr>
<td>Retail</td>
</tr>
<tr>
<td>Commercial</td>
</tr>
<tr>
<td>Employment</td>
</tr>
<tr>
<td>Parks/Open Space</td>
</tr>
<tr>
<td><strong>OXFORD- CITY NEIGHBORHOOD SOUTH</strong></td>
</tr>
<tr>
<td><strong>Land Use</strong></td>
</tr>
<tr>
<td>Housing</td>
</tr>
<tr>
<td>Retail</td>
</tr>
<tr>
<td>Parks/Open Space</td>
</tr>
<tr>
<td>Park-N-Ride</td>
</tr>
</tbody>
</table>
RETAIL AND COMMERCIAL

Over the next 20 years, current auto-oriented ‘big-box’ retail areas will be transformed into pedestrian-friendly, street-oriented retail districts.

A full range of goods and services including grocery stores, restaurants, and banks are envisioned within the Corridor. The retail district is envisioned to provide:
- A rich mix of both national retailers and local merchants. The Plan includes a range of sites that can meet the needs and variety of tenants
- Essential goods and services for residents, employees, and visitors of the Corridor station areas. This will result in a reduction of trips to retail centers outside the district and will, as a result, create an economic dividend for local merchants
- 18 hours of daily activity which will increase neighborhood safety by improving passive surveillance- ‘eyes on the station area’

Englewood CityCenter Retail & Commercial
Over a 20 year planning horizon the current big box, auto-oriented CityCenter shopping development will transition into a new urban mixed use retail district.
- New uses will be oriented along existing and new streets.
- Retail uses (businesses that engage in the sale of merchandise, food, drink and entertainment) will benefit from increased auto drive-by visibility from Englewood Parkway and accessibility from Hampden Avenue and Floyd Avenue
- Generally, retail uses will be located along east-west streets and commercial uses (businesses that engage in the sale of services) will be located on north-south streets
- Along a new Englewood Parkway park block amenity, building frontages are envisioned to include retail shops and restaurants aggregated continuously edge-to-edge without interruption at the ground floor of all new buildings
- Where possible, buildings may be repurposed or remodeled into ‘urban format’ stores
- Retail uses will require considerable parking. A new district-serving, multi-story parking structure with ground floor retail space is envisioned at the intersection of Elati and Floyd

Oxford Station Commercial
Commercial uses are primarily envisioned along Windermere Street fronting the Oxford Station platform.
- Convenience services and retail shops such as restaurants, cafes, hair salons, dry cleaners, banks or daycare centers are envisioned here
- Ground-floor, street oriented commercial storefronts should be integrated into the ground floor of residential development
Additional commercial storefronts should be encouraged along busy streets where curbside parking will be available.

Englewood West Neighborhood Commercial
The specific location of neighborhood-serving commercial will be determined by a master developer when the Corridor Plan is refined in the future. The neighborhood commercial should be:
- Centrally located, within easy walking distance of all in the neighborhood
- Meet essential real estate site requirements- along a busy street with good visibility from passing cars- with adjacent curbside parking
- Street-oriented
- Small in cumulative area (It should not create a competing center to the CityCenter district)

DEVELOPMENT SUMMARY

<table>
<thead>
<tr>
<th></th>
<th>SF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Englewood CityCenter</td>
<td></td>
</tr>
<tr>
<td>Street Oriented Retail</td>
<td>245,000</td>
</tr>
<tr>
<td>Street Oriented Commercial</td>
<td>100,000</td>
</tr>
<tr>
<td>Englewood City Neighborhood West</td>
<td>30,000</td>
</tr>
<tr>
<td>Oxford City Neighborhood South</td>
<td>10,000</td>
</tr>
</tbody>
</table>

* The specific location of neighborhood retail has not been determined but should be aggregated in an area that provides sufficient access and drive-by traffic and is well located to conveniently serve residents.
EMPLOYMENT

A variety of employment opportunities are envisioned throughout the corridor. A new transit-supportive employment district is envisioned for the Englewood Station area along Hampden and Dartmouth Avenues.

Hampden Avenue Employment Corridor
Lining both sides of Hampden Avenue, a ‘health and wellness’ office district consisting of corporate headquarters and office suites for medical, banking, technology, financial, law, engineering, and other professional uses is envisioned. The district:

- Strengthens and builds upon existing office tower and mid-rise buildings
- Provides highly desirable sites with good ‘addresses’ (high visibility and easy access) on a major arterial roadway
- Envisions to be competitive with suburban Class A office districts such as the Denver Tech Center
- Provides new employment sites for uses that may benefit from proximity to the Craig and Swedish Medical Centers east of Broadway
- Envisions redevelopment of the current Sports Authority parcels into a green corporate campus. Redevelopment of the site would consist of mid-rise buildings, a parking structure and private sports fields and other facilities
- Offers access to desirable employee amenities—the Englewood Parkway park blocks and retail and commercial uses

- Where change of use occurs, multi-family development (no minimum density) will be required. Single family development should be prohibited
- Adaptive reuse of existing structures is encouraged
- Development is envisioned to occur at an incremental parcel-by-parcel intensity. As such, consideration of adjacent existing industrial use (noise, odors, etc.) should be considered. Buffering, setbacks or other considerations that minimize impact to both uses should be explored

Dartmouth Employment District
New industrial, manufacturing and warehousing uses along with office development is envisioned along Dartmouth Avenue. The new employment development:

- Provides a site for industrial uses to relocate away from Corridor Incremental Employment/Housing Areas while remaining in Englewood
- Provides a buffer between the planned new residential neighborhood and the existing industrial and treatment plant uses north of Dartmouth
- Include 1-2 story buildings lining Dartmouth with parking and loading areas behind
- Should develop as a green campus-like setting
- Include screening and landscape buffering between the employment uses and residential areas

Incremental Employment/Housing Mix Areas
Existing industrial, manufacturing and warehousing uses are not transit supportive because they generally have few employees per business and have operational requirements that are vehicle dependent, which is at odds with a TOD pedestrian-oriented environment. Nevertheless, these areas include many uses that are viable, difficult to relocate and provide important services for the community. These uses should remain as long as property owners desire. Where redevelopment does occur:

- New transit-supportive (high number of jobs) industrial or service businesses are encouraged, first and foremost

NEW DEVELOPMENT SUMMARY

<table>
<thead>
<tr>
<th>Location</th>
<th>Type</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Englewood CityCenter</td>
<td>Office</td>
<td>1,600,000 SF</td>
</tr>
<tr>
<td>Englewood City Neighborhood West</td>
<td>Light Industrial &amp; Office</td>
<td>350,000 SF</td>
</tr>
</tbody>
</table>
RESIDENTIAL

Four new transit-supportive housing neighborhoods are envisioned within the corridor providing for a mix of high and medium density housing of market rate and affordable units with apartment, condominium, and townhome building types.

Englewood CityCenter
Redevelopment of the CityCenter parcels is envisioned to include:

- Redevelopment of existing big-box commercial parcels from Broadway to Elati into high-density (5-6 story minimum) apartments and condo housing. Buildings would include ground-floor retail and commercial uses with parking located below grade. ‘Texas Doughnut’ liner housing (buildings surrounding parking structures) should be discouraged in order to conform buildings to the short block faces and dense grid network laid out as the vision for the plan.
- Joint venture redevelopment of the current RTD Park-N-Ride site. The existing park-n-ride use could remain at grade. Apartments (3-4 story min.) and resident parking is envisioned to be built above.
- Joint venture apartment housing over the existing Civic Center parking structure. Senior housing or similar low parking needs housing is encouraged; shared parking should be explored.

Englewood City Neighborhood West
A mix of high and medium density multi-story (3 story minimum) apartments, condos and townhomes oriented toward or within easy access to new parks and the South Platte River is envisioned. The housing district should:

- Include development agreements that require numerous builders and designers to ensure architectural variety rather than a ‘cookie-cutter’ monoculture of similar buildings constructed by a single builder.
- Create a ‘mixed income’ neighborhood, offering both rental and home ownership opportunities. A target ratio of 1 affordable unit to every 4 market rate unit would be ideal.
- Distribute affordable units throughout to avoid a concentration of low income units.

Bates-City Neighborhood North
Located within the General Iron Works and Winslow Crane sites, new medium density (3 story minimum) apartments and condos are envisioned. The development of these areas should:

- Orient buildings toward roadways and new open spaces.
- Include a grid of public streets rather than private drives and parking lots.
- Screen parking lots from adjacent existing uses and streets. Locate parking lots behind buildings.
- Development agreements should require numerous builders and designers to ensure architectural variety.
- Create a ‘mixed income’ neighborhood, offering both rental and home ownership opportunities. A target ratio of 1 affordable unit to every 4 market rate unit would be ideal.
- Affordable units should be distributed throughout to avoid a concentration of low income units.

DEVELOPMENT SUMMARY

<table>
<thead>
<tr>
<th>Location</th>
<th>Target Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Englewood CityCenter</td>
<td>2,950</td>
</tr>
<tr>
<td>Density</td>
<td>Min. 15/ Max. 75 DU/AC</td>
</tr>
<tr>
<td>Total Number of Units</td>
<td>1,150 Dwelling Units</td>
</tr>
<tr>
<td>Parking Ratio</td>
<td>1 Space Per Unit</td>
</tr>
<tr>
<td>Housing Types</td>
<td>Apartment, Condo</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Englewood City Neighborhood West</th>
<th>1,150 Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density</td>
<td>Min. 15/ Max. 75 DU/AC</td>
</tr>
<tr>
<td>Total Number of Units</td>
<td>2,950 Dwelling Units</td>
</tr>
<tr>
<td>Parking Ratio</td>
<td>1 Space Per Unit</td>
</tr>
<tr>
<td>Housing Types</td>
<td>Townhome, Apartment, Condo</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Oxford City Neighborhood South</th>
<th>3,450 Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density</td>
<td>Min. 15/ Max. 75 DU/AC</td>
</tr>
<tr>
<td>Total Number of Units</td>
<td>3,450 Dwelling Units</td>
</tr>
<tr>
<td>Parking Ratio</td>
<td>1 Space Per Unit</td>
</tr>
<tr>
<td>Housing Types</td>
<td>Townhome, Apartment, Condo</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bates City Neighborhood North</th>
<th>600 Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density</td>
<td>Min. 15/ Max. 75 DU/AC</td>
</tr>
<tr>
<td>Total Number of Units</td>
<td>600 Dwelling Units</td>
</tr>
<tr>
<td>Parking Ratio</td>
<td>1 Space Per Unit</td>
</tr>
<tr>
<td>Housing Types</td>
<td>Townhome, Apartment, Condo</td>
</tr>
</tbody>
</table>
Private and public parking needs within the station area will be met through on-street parking, within existing structures and existing or new park-n-Ride facilities.

Private Parking

Although transit is provided within the corridor, parking will nevertheless be required for new development. To ensure that new development is competitive with similar uses outside the corridor and existing adjacent uses are not adversely impacted by overflow parking, all new development parcels have been planned to accommodate parking, at the following minimum ratios:

- Residential - 1 space per residential dwelling unit
- Retail/Commercial -3 spaces per 1000 square feet
- Employment- 3 spaces per 1000 sf

Wherever parking is constructed, it should be:

- Screened from sidewalks and bikeways
- Built behind, to the side or within buildings
- Shared wherever viable
- Reduced. Maximums rather than minimums should be encouraged but not required

park-n-Ride

Currently, existing park-n-Ride facilities are at or near capacity at peak periods. As a result, LRT commuters are parking on-street at the Oxford Station, impacting existing business operations and lessening potential client parking spaces. Likewise, LRT commuters are also causing parking impacts north of Englewood Station at Cushing Park and in the surrounding residential neighborhood. To meet parking demand and address the Oxford issues, a new RTD park-n-Ride facility could be located near but not adjacent to the Oxford Station. Constructing a new facility at Oxford would address past Englewood park-n-Ride expansion issues voiced by the community. The Englewood park-n-Ride lot would not need to be enlarged. No acquisition or impact to current site or adjacent parcels would be required. The Oxford park-n-Ride could be constructed either at the southwest intersection of Oxford and Navajo or within the current Meadow Gold parcel directly north of the City’s Recreation Center. Further analysis by RTD and consultations with City Council will be required to determine if either of these sites (or another within the vicinity) will be built. At a minimum 400 spaces should be provided.

Joint venture partnerships that meet both parking and private development goals should be encouraged.
Parking

LEGEND
- Retail
- Ground-Floor Retail/Commercial
- Hotel
- Employment
- Housing
- Incremental Employment/Housing Mix
- Housing over Park-n-Ride
- Parks & Open Space
- New Street
- Existing Schools
- Existing Parks & Open Space
- Future Station
- Existing Station
- Light Rail Alignment

- Existing RTD park-N-Ride
- Existing City Parking Structure
- Future park-N-Ride Options
New parks and open spaces are necessary amenities for high density development. Parks and open spaces encourage private investment and improve the quality of life for those who live, work or visit the Englewood corridor.

The parks framework provides active and passive amenities including linear parks, neighborhood parks, and recreation facilities and plazas. The framework:

- Links the Little Dry Creek open space corridor via a linear park promenade through CityCenter and connects with the Englewood Station Piazza, the South Platte River corridor and the new City Neighborhood West and North
- Serves both existing and future station area residents, employees, and visitors
- Parks are located as a focus for redevelopment within each station area
- Includes long-term modifications to the piazza to further activate the Englewood station area and promote greater use of the space for daily and community-wide events

### Development Summary

<table>
<thead>
<tr>
<th>Location</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Englewood CityCenter</strong></td>
<td></td>
</tr>
<tr>
<td>Englewood Parkway Linear Parks</td>
<td>6 AC</td>
</tr>
<tr>
<td>Piazza Enhancements</td>
<td>1 AC</td>
</tr>
<tr>
<td><strong>Englewood City Neighborhood West</strong></td>
<td></td>
</tr>
<tr>
<td>Floyd Avenue Linear Parks</td>
<td>6.5 AC</td>
</tr>
<tr>
<td>Central Park</td>
<td>4.5 AC</td>
</tr>
<tr>
<td><strong>Oxford City Neighborhood South</strong></td>
<td></td>
</tr>
<tr>
<td>Neighborhood Park 1</td>
<td>1.2 AC</td>
</tr>
<tr>
<td>Neighborhood Park 2</td>
<td>2.4 AC</td>
</tr>
<tr>
<td>Neighborhood Park 3</td>
<td>1.4 AC</td>
</tr>
<tr>
<td><strong>Bates City Neighborhood North</strong></td>
<td></td>
</tr>
<tr>
<td>Pocket Park</td>
<td>.25 AC</td>
</tr>
</tbody>
</table>

Regulatory changes are required to ensure the corridor plan is developed as envisioned. Generally, areas identified for redevelopment in the Englewood LRT corridor consist primarily of industrial zoned parcels and other use categories that permit low density or auto-oriented site development. Updates or new zoning regulations are required to align current code requirements to envisioned transit supportive and pedestrian-friendly development. Possible options:

- Rezone I-1 and I-2 industrial zones to more transit supportive existing zoning categories
- Preserve the existing Planned Unit Development (PUD-2) and the Mixed Use-B1 base zones and address vision concepts on a development-by-development basis
- Replace existing inconsistent zoning categories with a new mixed-use transit station area zone

Zoning Reform

The regulatory recommendations include:

- Maintaining current base zoning and providing new permitted uses and development regulations as an ‘overlay’
- Establishing specific subareas that ensure development character consistent with the station area plan
- Implementing new and modifying existing development standards consistent with the plan and identified on the following pages

Station Area Zones/Overlays

Zone/overlay districts recommended for the corridor include the following designations:

- Mixed-Use-Transit Station Area (MX-TSA) Designation
- Mixed Use-Industrial (MX-IND) Designation
- Mixed Use Business (MU-B1), (MU-B-2) Designation

Subareas

Six character subareas are identified within the three zoning/overlay district designations. Each subarea consists of primary land uses that establish the architectural character of the built environment.

- CityCenter Mixed-Use Retail and Housing Sub-District–Street-oriented retail, commercial and upper floor high density housing
- CityCenter Mixed-Use Office and Commercial Sub-District–Mid-rise corporate and professional office uses, supporting ground floor retail and commercial uses
- City Neighborhood West Mixed-Use Office and Commercial Sub-District–Low-rise light industrial, office, commercial, and services uses
- City Neighborhood West Housing Sub-District–Medium to high density housing and neighborhood serving retail and commercial uses
- City Neighborhood North Housing Sub-District–Medium density housing
- City Neighborhood South Housing District–Medium to high density housing and neighborhood-serving commercial and employment uses.
Recommended Subareas

- **CITY NEIGHBORHOOD WEST**
  - Mixed Use Office & Commercial

- **CITY NEIGHBORHOOD WEST**
  - Medium to High Density Housing

- **CITY NEIGHBORHOOD NORTH**
  - Medium to High Density Housing

- **CITYCENTER**
  - Mixed Use Retail & High Density Housing

- **CITY NEIGHBORHOOD SOUTH**
  - Medium to High Density Housing
DEVELOPMENT STANDARDS

Key development standards for each land use are identified.

### RETAIL & COMM. DEVELOP. STANDARDS

<table>
<thead>
<tr>
<th>Building Setback from Street</th>
<th>0 feet max. for groundfloor uses*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entries</td>
<td>Ground level to provide a primary street-facing entry</td>
</tr>
<tr>
<td>Transparency</td>
<td>70% transparency at street level**</td>
</tr>
</tbody>
</table>

* Setbacks apply to ground floors only. Buildings may be setback on any floor above the ground floor.

** Measured as linear feet of total building frontage at 5 feet above the finished grade of the adjacent streets to promote optimum visibility for passers-by; shall be entirely transparent with the exception of applied window signs that shall be no larger than 10% of any single opening; shall not include tinted, reflective or other opaque materials or treatments.

### RESIDENTIAL DEVELOPMENT STANDARDS

<table>
<thead>
<tr>
<th>Building Setback from Street</th>
<th>10 feet max. for groundfloor uses*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entries</td>
<td>Ground level units fronting a street to provide a primary street-facing entry</td>
</tr>
<tr>
<td></td>
<td>Ground level units fronting an accessway or courtyard to provide a primary exterior entry</td>
</tr>
<tr>
<td>Transparency</td>
<td>50% transparency at street level**</td>
</tr>
</tbody>
</table>

* Setbacks apply to ground floors only. Buildings may be setback on any floor above the ground floor.

** The percent of transparency is measured at 5 feet above the building’s first finished floor height to account for raised stoops or terraces, which provide privacy, and a transition and separation from the street. Linear transparency measurement encompasses the entire building frontage.
## Employment Development Standards

<table>
<thead>
<tr>
<th>Building Setback from Street</th>
<th>10 feet max. for groundfloor uses*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entries</td>
<td>Ground level uses fronting a street to provide a primary street-facing lobby entry.</td>
</tr>
<tr>
<td>Transparency</td>
<td>50% transparency at street level**</td>
</tr>
</tbody>
</table>
| Heights                     | Mid-Rise Office at 3 to 8 Stories  
                               | Low-Rise Office at 1 to 3 Stories  |

* Setbacks apply to ground floors only. Buildings may be setback on any floor above the ground floor.

** The percent of transparency is measured at 5 feet above the building's first finished-floor height to account for raised stoops or terraces, which provide privacy, and a transition and separation from the street. Linear transparency measurement encompasses the entire building frontage.
CIRCULATION FRAMEWORK
OVERVIEW

The circulation framework establishes a network of complete streets within the study area that allow pedestrians, bicyclists, motorists and transit users to move directly, conveniently, and safely throughout the corridor.

A COMPLETE STREETS FRAMEWORK

The circulation framework establishes a network of Corridor-wide ‘Complete Streets’ that reduce auto dependency by enabling pedestrians, bicyclists, and shuttle transit users to move directly, conveniently, and safely throughout the corridor.

Currently, the Corridor is characterized by a circulation framework that is dominated by automobiles and trucks. Pedestrian and bicycle facilities are substandard and as a result, the ability of area residents, shoppers, employees and visitors to access transit is severely constrained. The Complete Streets Framework aims to create a balanced Corridor transportation network that will in turn result in higher transit ridership and an improved quality life.

While essential motor vehicle mobility will be maintained, design of the streets and rail corridor will have a strong bias toward active transportation modes. The Corridor will be a place where pedestrians and cyclists are on equal footing with motorists. Safe and direct access routes are planned to link transit station platforms and key destinations within the Corridor. Auto, truck, pedestrian and cyclist conflicts with will be minimized.
CIRCULATION FRAMEWORK

The circulation framework identifies a full network of circulation improvements to safely and conveniently access transit stations.

The Circulation Framework:

- Fosters 5 minute or shorter pedestrian and bicycle trips. The transportation network is integrated into the land use framework. Daily destinations—shopping and employment uses are linked. Access to existing residential neighborhoods is emphasized.
- Minimizes barriers. 360 degree access to all stations is emphasized.
- Improves under-utilized recreation routes and access to recreational facilities. A new ‘Rail Trail’ will link the stations together and existing neighborhoods and redevelopment areas to the South Platte River.
- Considers pedestrian and bicycle travel at night and during inclement weather. Routes are located where ‘eyes-on-the-street’ passive surveillance will be prevalent.
- Considers pedestrian and bicycle travel at night and during inclement weather. Routes are located where ‘eyes-on-the-street’ passive surveillance will be prevalent.
- Addresses capacity limitations of major roadway corridors—In particular, the circulation framework included a new collector street, the Floyd Extension, that provides new roadway capacity to reduce impacts on congested existing streets and intersections.
- Balances transportation modes while maintaining auto and truck access. The framework also provides transportation improvements for pedestrians and bicycles that will greatly increase their use.
- Improves livability—The framework is more than a functional transportation network; it also establishes streets and sidewalks as ‘places’ to stop and linger.

The circulation framework consists of four major circulation elements and additional detail for priority streets and rail trail improvements.

**Mobility Emphasis**—primary auto routes to existing and future neighborhoods, light rail stations and through the corridor.

**Pedestrian and Bicycle**—‘5-minute’ safe and convenient station access routes.

**Bus Transit and Shuttle**—A local circulator between the stations and employment and residential uses.

**New and Enhanced Streets**—Additions to the local street grid to accommodate new development.
Circulation Framework

LEGEND

- Rail Trail
- Protected Bikeway Emphasis
- Bike Lane/Bike Boulevard Emphasis
- Mobility Emphasis
- Bus Route
- Shuttle Route
- Existing Schools
- Existing Parks & Open Space
- Existing Ped/Bike Trails

- Future Station
- Existing Station
- Light Rail Alignment

Dashed lines are outside of City of Englewood limits or require additional study.
MOBILITY EMPHASIS

The Mobility Emphasis Framework identifies essential multi-modal routes to light rail stations and essential motor vehicle regional routes through the corridor.

Minimizing Roadway Capacity Impacts
Currently, arterial roads are at capacity during peak travel periods. High traffic volumes along Santa Fe Drive and Hampden Avenue impact the ability to access the station area and land uses within the corridor. Any future corridor development has the potential to exacerbate existing peak-hour, near grid-lock conditions.

While the mobility emphasis and improvements do not solve roadway congestion at a regional level, the improvements do provide the ability for those traveling locally within Englewood and Sheridan an opportunity to access stations and land uses within the corridor more efficiently.

The Floyd Avenue Extension ‘Ventilator’
Extending Floyd Avenue west from Inca Street under Santa Fe Drive and over the South Platte River to Zuni Street is intended to:
- Provide Englewood station multimodal access to redevelopment sites west of Santa Fe Drive
- Improve peak period intersection operations within Englewood and Sheridan by enabling short length motor vehicle trips to by-pass Hampden and Dartmouth Avenues resulting in fewer trips through these peak-hour congested intersections

Rail Trail Bridge Congestion Benefits
A multi-purpose rail trail featuring arterial road overpass bridge crossings will provide safe pedestrian and bicycle crossings, as well as, improved vehicle mobility on roadways below. The separated bridge crossings will result in a reduction in the volume and frequency of at-grade pedestrian crossings at existing arterial intersection crosswalks, thereby providing more available green through time for automobile traffic on Hampden, Oxford and Dartmouth Avenues.
Mobility Emphasis

LEGEND
- Mobility Emphasis
- Existing Schools
- Existing Parks & Open Space
- Existing Ped/Bike Trails
- Future Station
- Existing Station
- Light Rail Alignment

Dashed lines are outside of City of Englewood limits or require additional study.

FLOYD AVENUE EXTENSION
GRADE-SEPARATED RAIL TRAIL BRIDGES
GRADE-SEPARATED RAIL TRAIL BRIDGES
A five-minute network of sidewalks, bikeways, and trails is planned that provides safe and direct access between transit stations, new development, and existing neighborhoods.

The pedestrian and bicycle elements:
- Increase access to station platforms by bridging existing barriers, such as Santa Fe Drive.
- Decrease auto dependency
- Improve access to existing local and regional recreation amenities such as the South Platte River Trail
- Build upon, reinforce and enhance the existing Englewood Master Bicycle Plan

Rail Trail
A recreation and station access loop primarily within the existing BNSF right of way adjacent to the RTD trackway. The location of the trail route would begin, on the north, at the General Iron Works site adjacent to Amherst Avenue and Elati Street intersection. It would then continue south along the existing LRT corridor and terminate at the Big Dry Creek Trail near Littleton. The trail would be completely separated from conflicts with automobile traffic through the construction of bridges over existing arterial roadways. Existing linkages to the South Platte Trail would be enhanced at Dartmouth and Layton Avenues. The multi-use trail would accommodate both pedestrians and bicyclists exclusively. Excluding maintenance and emergency vehicles, no motorized vehicles would be permitted. The City will be required to negotiate rail trail easements or rights-of-way acquisitions along the rail corridor and dedications or easements within future development proposals.

Protected Bikeways
Physically separated from auto traffic by a vertical extruded curb, landscaping, sidewalk and/or curb-side parked cars, protected bikeways provide a safe bike facility that has a proven ability to significantly increase bicycle ridership above ‘paint-on-the-street bike lanes. Protected bikeways are planned along wide arterial streets where existing roadway width will enable their construction to occur without impacting adjacent properties or pedestrian sidewalks or crosswalks. The planned routes provide safe and protected linkages between link station platforms to existing neighborhoods, employment centers, and new development areas on busy streets where cycling is currently generally unsafe. Protected bikeway lanes should be at least 5’ wide. Bidirectional protected bikeways must be a minimum of 10’ in width.

Bike Lanes and Bike Boulevards
Corridor bike lanes (on-street striped bicycle facilities) will compliment planned protected bikeways. Bike lanes will only be constructed where protected bikeways are constrained by narrow roadway dimensions. Planned routes are generally consistent with routes currently identified in the City’s Master Bicycle Plan. In all instances bike lanes should not be narrower than five feet.

Bike boulevards are envisioned exclusively for quiet, low traffic volume neighborhood streets where average daily auto trips are less than 3,000. On these bike boulevard routes, cyclists will share travel lanes with autos. Roadway painted bike symbols will be used to alert drivers of a shared roadway condition.

Sidewalks and Crosswalks
At a minimum, along major routes connecting to the transit stations, direct and safe sidewalks will be provided. Including:
- 8-foot minimum width of sidewalks through residential neighborhoods
- 12-foot minimum width of sidewalks through retail and commercial areas
- Marked crosswalks at all arterial and collector streets
- Adequate street lighting
- Canopy trees and/or weather protecting awnings along commercial and retail buildings
- Benches in retail and commercial areas
- Pedestrian signals at signalized intersections
Pedestrian and Bicycle

**LEGEND**
- Rail Trail
- Protected Bikeway Emphasis
- Bike Lane/Bike Boulevard Emphasis
- Mobility Emphasis
- Bus Route
- Skate/Bike Path
- Existing Schools
- Existing Parks & Open Space
- Existing Ped/Bike Trails
- Future Station
- Existing Station
- Light Rail Alignment

Dashed lines are outside of City of Englewood limits or require additional study.

- **RAIL TRAIL**
- **BIKE LANE OR BIKE BOULEVARD**
- **PROTECTED BIKEWAY**
Feeder bus service provides important LRT station access for those beyond walking or biking distance. Additionally, the bus service provides safe and comfortable transit access during inclement weather and at night.

RTD Bus Service
Line changes have not been proposed for the Englewood LRT Corridor. However, when a Bates Station is added in the future, an additional service or adjustments to current routes could be made to serve the station platform.

The planned extension of Englewood Parkway will require some adjustments to the circulation patterns of buses that serve the Englewood Station. This new mixed traffic roadway connection will create a more vibrant station environment and provide essential access to a planned hotel adjacent to the station. The new roadway will connect the platform to Inca Street through the existing Piazza, continue through the existing busway and connect to Floyd Avenue. To accommodate this improvement, operational changes to the existing exclusive busway will be necessary.

Local Circulator (art Shuttle Bus) Service
The art shuttle bus currently provides a loop service connecting the Englewood Station to the Craig/Swedish Medical Centers. A new, direct route is planned along Englewood Parkway/Girard Street and includes a future extension to west of Sante Fe along the planned Floyd extension.

Light Rail Stations
Englewood and Oxford Stations- Existing station platform enhancements include:
- Additional bike parking
- Rail trail pedestrian/bike access improvements
- Improvements to platforms at Englewood Station include:
  - Wind protection at existing canopies
  - Overhead rain and sun protection between the existing canopies and over the existing pedestrian bridge
  - New stairways that provide direct access to Englewood Parkway and future hotel development site

Future Bates Station- As part of the Southwest Corridor Light Rail Plan, RTD has identified a future Bates Station. However, due to high construction costs and operational obstacles combined with a lack of a viable public-private funding strategy, it is not likely to be constructed. Should the City and RTD agree to abandon plans for a Bates Station, the City should pursue negotiations with RTD to reallocate the Bates Station resources to improving pedestrian and bicycle connections to the Englewood and Oxford Stations.

Potential Tufts-Union Station- In looking at the corridor in a comprehensive fashion, an opportunity for an additional station was identified approximately ¾ of a mile south of the Oxford Station, near Tufts Avenue. Preliminary assessment of this area indicates that potential TOD may be greater at this location than at the Bates Station. Additional station area planning will be required to assess TOD potential for this area, the impacts on the operations of the transit corridor, possibilities for additional park-n-ride, required improvements to roadways to access the station platform and station area TOD, and an economic assessment and cost estimate of the funding and construction of a potential Tufts-Union Station.
NEW AND ENHANCED STREETS

A street grid establishes appropriately scaled development blocks and disperses vehicle traffic away from existing congested streets.

The purpose of new and enhanced streets is to:
- Improve access to the station
- Provide for smaller block sizes that support convenient and direct pedestrian access to the stations
- Promotes smaller buildings rather than monolithic architecture associated with large block development sites

New Local (Neighborhood) Streets
All new streets will be constructed to public street standards and include:
- On-street parking along all curbs
- Two-way auto travel lanes
- Bicycle facilities where indicated in the pedestrian and bicycle framework
- Pedestrian-scaled streetlights
- Canopy trees
- Landscaped curb extensions
- Sidewalks on both sides of streets at 8-foot minimum
- Pedestrian crosswalks at all arterial and collector street intersections

Enhanced Streets
Enhanced streets provide a continuation of the existing street grid or provide additional pedestrian and bicycle facilities.

Floyd Avenue Extension
- Floyd Avenue will be extended west of Inca Street providing direct access to a major redevelopment area west of Santa Fe Drive, establishing a new east/west parallel route to Dartmouth Avenue and Hampden Avenue

Englewood Parkway
- Englewood Parkway is enhanced with a protected bikeway and sidewalk enhancements that provide improved pedestrian and bicycle access between the CityCenter piazza, Englewood Station and the Broadway commercial corridor
New and Enhanced Streets

LEGEND
- Rail Trail
- Protected Bikeway Emphasis
- Bike Lane/Bike Boulevard Emphasis
- Mobility Emphasis
- Bus Route
- Shovel Ready
- Existing Schools
- Existing Parks & Open Space
- Existing Ped/Bike Trails
- Elected Station
- Existing Station
- Light Rail Alignment

Dashed lines are outside of City of Englewood limits or require additional study.

NEW AND ENHANCED STREETS
IMPLEMENTATION
OVERVIEW

TOD implementation requires the identification of public actions (‘game-changing’ projects) that will produce a sustained and widespread private market reaction.

Numerous projects are identified in the Corridor Plan. Not all projects are equal, some are time sensitive, others will require additional study and coordination and some will require substantial financial commitment. The Implementation Strategy identifies a concise list of manageable projects that best address the project objectives and are essential for significant positive change.

The Implementation Strategy identifies the following:

- Public actions required to stimulate private investment
- Private investment stimulated by public actions
- Responsibilities for implementing public projects

A well defined ‘road map and ‘business case’ for implementation includes the following:

- Conceptual cost estimates for public and private projects.
- A schedule identifying projects and timelines for programming, designing, and constructing projects
IMPLEMENTATION PROJECTS

The List below identifies projects for each of the station areas in the corridor.

<table>
<thead>
<tr>
<th>STATION ACTIVATION</th>
<th>ENGLEWOOD PARKWAY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Public Projects</strong></td>
<td><strong>Public Projects</strong></td>
</tr>
<tr>
<td>• Englewood Parkway Extension</td>
<td>• Acquire Land, Buildings &amp; Demolition</td>
</tr>
<tr>
<td>• Plaza Enhancements</td>
<td>• Design &amp; Construct Parks</td>
</tr>
<tr>
<td>• Station Platform Enhancements</td>
<td>• Design &amp; Construct Local Street</td>
</tr>
<tr>
<td><strong>Private Projects</strong></td>
<td><strong>Private Projects</strong></td>
</tr>
<tr>
<td>• Retail Storefronts</td>
<td>• New Mixed-Use Retail &amp; Housing</td>
</tr>
<tr>
<td>• Hotel</td>
<td>• New Mixed-Use Office &amp; Commercial</td>
</tr>
<tr>
<td>• Housing Over park-n-Ride</td>
<td>• New Street Grid</td>
</tr>
<tr>
<td>• Housing Over Parking Structure</td>
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<table>
<thead>
<tr>
<th>FLOYD AVENUE EXTENSION</th>
<th>OXFORD PARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Public Projects</strong></td>
<td><strong>Public Projects</strong></td>
</tr>
<tr>
<td>• Acquire Land, Buildings &amp; Demolition</td>
<td>• Acquire Land, Buildings &amp; Demolition</td>
</tr>
<tr>
<td>• Design &amp; Construct Roadway Extension, Underpasses, Bridges and Signalization</td>
<td>• Design and Construct Two Parks</td>
</tr>
<tr>
<td><strong>Private Projects</strong></td>
<td><strong>Private Projects</strong></td>
</tr>
<tr>
<td>• New Housing</td>
<td>• New Housing</td>
</tr>
<tr>
<td>• New Parks</td>
<td></td>
</tr>
<tr>
<td>• New Street Grid</td>
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<table>
<thead>
<tr>
<th>NEIGHBORHOOD CONNECTIONS</th>
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<tbody>
<tr>
<td><strong>Public Projects</strong></td>
<td><strong>Public Projects</strong></td>
</tr>
<tr>
<td>• Rail Trail &amp; Three Bridges</td>
<td><strong>Private Projects</strong></td>
</tr>
<tr>
<td>• Protected Bikeway (Englewood Station to Broadway)</td>
<td>• Easements for Rail Trail and Rail Trail Access</td>
</tr>
</tbody>
</table>
IMPLEMENTATION PROJECTS

- Station Activation
- Floyd Ave Extension
- Neighborhood Connections
- Englewood Parkway
- Oxford Parks
STATION ACTIVATION

Station activation projects improve access to the station and create a more active station environment.

PUBLIC PROJECTS

<table>
<thead>
<tr>
<th>Project</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG LEWOOD PARKWAY EXTENSION</td>
<td></td>
</tr>
<tr>
<td>Demolish Existing Roadway/Reconstruct Piazza</td>
<td>$2,000,000</td>
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<tr>
<td>New Roadway</td>
<td>$1,000,000</td>
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<tr>
<td><strong>PUBLIC INVESTMENT TOTAL:</strong></td>
<td><strong>$3,000,000</strong></td>
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PRIVATE PROJECTS

<table>
<thead>
<tr>
<th>Project</th>
<th>Units</th>
<th>Cost</th>
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<tbody>
<tr>
<td>Hotel</td>
<td>250 Rooms</td>
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<tr>
<td>Parking</td>
<td>80 Spaces</td>
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<tr>
<td>Housing over RTD park-n-Ride</td>
<td>250 DU</td>
<td>$50,000,000</td>
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<tr>
<td>Housing Over Parking</td>
<td>150 DU</td>
<td>$30,000,000</td>
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<tr>
<td>Retail</td>
<td>15,000 SF</td>
<td>$3,750,000</td>
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<td><strong>PRIVATE INVESTMENT TOTAL:</strong></td>
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<td><strong>$123,750,000</strong></td>
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</table>

PUBLIC ACTION PLAN

<table>
<thead>
<tr>
<th>Required Steps</th>
<th>Who</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ENGLEWOOD PARKWAY EXTENSION</strong></td>
<td></td>
</tr>
<tr>
<td>1) Prepare Englewood Extension Concept Design</td>
<td>City/RTD</td>
</tr>
<tr>
<td>2) Prepare Contract Documents</td>
<td>City/Consultant</td>
</tr>
<tr>
<td>3) Bid Project</td>
<td>City/Consultant</td>
</tr>
<tr>
<td>4) Construct Project</td>
<td>City/Contractor</td>
</tr>
<tr>
<td><strong>HOTEL</strong></td>
<td></td>
</tr>
<tr>
<td>1) Prepare Site Development Framework</td>
<td>City/Consultant</td>
</tr>
<tr>
<td>2) Prepare Developer Offering</td>
<td>City</td>
</tr>
<tr>
<td>3) Review Developer Proposal</td>
<td>City/Consultant</td>
</tr>
<tr>
<td>4) Prepare Contract Documents</td>
<td>City/Developer</td>
</tr>
<tr>
<td>5) Construct Project</td>
<td>City/Developer</td>
</tr>
</tbody>
</table>
STATION ACTIVATION PROJECTS

HOUSING OVER CITY PARKING $30 MILLION

HOTEL $40 MILLION

HOUSING OVER RTD PARK-N-RIDE $50 MILLION

RETAIL STOREFRONT $2.5 MILLION

ENGLEWOOD PARKWAY EXTENSION $3 MILLION
FLOYD AVENUE EXTENSION

The Floyd Avenue extension projects include extending Floyd Avenue west of Inca Street to leverage investment west of Santa Fe Drive.

### PUBLIC PROJECTS

<table>
<thead>
<tr>
<th>Project</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>BNSF/LRT Bridge</td>
<td>$3,200,000</td>
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<tr>
<td>Santa Fe Drive Bridge</td>
<td>$4,800,000</td>
</tr>
<tr>
<td>Underpass Retaining Walls</td>
<td>$9,500,000</td>
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<tr>
<td>Underpass Earthwork</td>
<td>$1,500,000</td>
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<tr>
<td>Shoofly for Structures</td>
<td>$7,000,000</td>
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<tr>
<td>Roadway Extension &amp; Acquisition (Inca to S Platte)</td>
<td>$6,000,000</td>
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<tr>
<td>South Platte Bridge</td>
<td>$6,000,000</td>
</tr>
<tr>
<td>Future Floyd Ave (West of S Platte) &amp; Darmouth Ave Upgrade</td>
<td>$10,000,000</td>
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<tr>
<td>Pump Station</td>
<td>$5,000,000</td>
</tr>
<tr>
<td>Misc.</td>
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<td><strong>PUBLIC INVESTMENT TOTAL:</strong></td>
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### PRIVATE PROJECTS

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<tr>
<th>Project</th>
<th>Units</th>
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<td>Housing</td>
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<tr>
<td>Parking</td>
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<td>Parks</td>
<td>11 AC</td>
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<tr>
<td>Retail</td>
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<td>Office</td>
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<td>Parking</td>
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<td><strong>$783,500,000</strong></td>
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### PUBLIC ACTION PLAN

<table>
<thead>
<tr>
<th>Required Steps</th>
<th>Who</th>
</tr>
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<tbody>
<tr>
<td>FLOYD AVENUE EXTENSION</td>
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</tr>
<tr>
<td>1) Land Acquisition and Demolition</td>
<td>City</td>
</tr>
<tr>
<td>2) Prepare Floyd Extension Concept Design</td>
<td>City/BNSF/RTD/CDOT</td>
</tr>
<tr>
<td>3) Prepare Contract Documents</td>
<td>City/Consultant</td>
</tr>
<tr>
<td>4) Bid Project</td>
<td>City/Consultant</td>
</tr>
<tr>
<td>5) Construct Project</td>
<td>City/Contractor</td>
</tr>
</tbody>
</table>
FLOYD AVENUE EXTENSION PROJECTS

MIXED-USE OFFICE
$98 MILLION

HOUSING & PARKS
$683 MILLION

DARTMOUTH AVENUE UPGRADE
$5 MILLION

FLOYD AVENUE UNDERPASSES & BRIDGES
$26 MILLION*

FUTURE FLOYD AVENUE
$5 MILLION

SOUTH PLATTE BRIDGE
$6 MILLION*

FLOYD AVENUE EXTENSION
$6 MILLION*

* Does Not Include Miscellaneous Underpass/Bridges Costs or Pump Station
ENCEWODE PARKWAY

The Englewood Parkway projects include linear park blocks from Inca Street to Acoma Street that transform the investment environment along Englewood Parkway and provide a high quality amenity for street oriented retail, housing and professional office development.

<table>
<thead>
<tr>
<th>PUBLIC PROJECTS</th>
<th>Project</th>
<th>Cost</th>
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</thead>
<tbody>
<tr>
<td>ENGLEWOOD PARKWAY</td>
<td>Land Acquisition and Demo</td>
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<td></td>
<td>Construct Parks</td>
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<tr>
<td></td>
<td>Construct Local Street</td>
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<th>Units</th>
<th>Cost</th>
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<td></td>
<td>Mixed-Use Retail &amp; Housing</td>
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<tr>
<td></td>
<td>Housing</td>
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<td>Retail</td>
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<td></td>
<td>Parking</td>
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<td></td>
<td>Mixed-Use Office &amp; Commercial</td>
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<td></td>
<td>Office</td>
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<td></td>
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<td></td>
<td>Commercial</td>
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<tr>
<th>PUBLIC ACTION PLAN</th>
<th>Required Steps</th>
<th>Who</th>
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<tr>
<td>ENGLEWOOD PARKWAY-</td>
<td>1) Land Acquisition and Demolition</td>
<td>City</td>
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<tr>
<td></td>
<td>2) Prepare Englewood Parkway Parks and Local Street Concept Design</td>
<td>City/Consultant</td>
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<tr>
<td></td>
<td>3) Prepare Contract Documents</td>
<td>City/Consultant</td>
</tr>
<tr>
<td></td>
<td>4) Bid Project</td>
<td>City/Contractor</td>
</tr>
<tr>
<td></td>
<td>5) Construct Project</td>
<td>City/Contractor</td>
</tr>
</tbody>
</table>
ENGLWOOD PARKWAY PROJECTS

- MIXED-USE RETAIL & HOUSING: $247 MILLION
- PARKS: $49 MILLION
- MIXED-USE OFFICE & COMMERCIAL: $319 MILLION
- LOCAL STREET: $1.5 MILLION
OXFORD PARKS

The Parks Projects provides a green space amenity required for market rate, high density housing.

PUBLIC PROJECTIONS

<table>
<thead>
<tr>
<th>Project</th>
<th>Cost</th>
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</thead>
<tbody>
<tr>
<td>PARK 1</td>
<td></td>
</tr>
<tr>
<td>Land Acquisition &amp; Demolition</td>
<td>$2,500,000</td>
</tr>
<tr>
<td>Construct Park</td>
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<tr>
<td>PARK 2</td>
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<tr>
<td>Land Acquisition</td>
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<tr>
<td>Construct Park</td>
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PUBLIC INVESTMENT TOTAL: $5,000,000

PRIVATE PROJECTS

<table>
<thead>
<tr>
<th>Project</th>
<th>Units</th>
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<tbody>
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<td>Housing</td>
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</tbody>
</table>

PRIVATE INVESTMENT TOTAL: $788,000,000

PUBLIC ACTION PLAN

<table>
<thead>
<tr>
<th>Required Steps</th>
<th>Who</th>
</tr>
</thead>
<tbody>
<tr>
<td>PARK 1</td>
<td>City/Consultant</td>
</tr>
<tr>
<td>1) Land Acquisition and Demolition</td>
<td>City/Consultant</td>
</tr>
<tr>
<td>2) Prepare Park Concept Design</td>
<td>City/Consultant</td>
</tr>
<tr>
<td>3) Prepare Contract Documents</td>
<td>City/Consultant</td>
</tr>
<tr>
<td>4) Bid Project</td>
<td>City/Contractor</td>
</tr>
<tr>
<td>5) Construct Project</td>
<td>City/Consultant</td>
</tr>
<tr>
<td>PARK 2</td>
<td>City/Consultant</td>
</tr>
<tr>
<td>1) Land Acquisition and Demolition</td>
<td>City/Consultant</td>
</tr>
<tr>
<td>2) Prepare Park Concept Design</td>
<td>City/Consultant</td>
</tr>
<tr>
<td>3) Prepare Contract Documents</td>
<td>City/Consultant</td>
</tr>
<tr>
<td>4) Bid Project</td>
<td>City/Contractor</td>
</tr>
<tr>
<td>5) Construct Project</td>
<td>City/Contractor</td>
</tr>
</tbody>
</table>
OXFORD PARKS PROJECTS

HOUSING & STATION RETAIL
$788 MILLION

PARK 1
$3.5 MILLION

PARK 2
$1.5 MILLION
NEIGHBORHOOD CONNECTIONS

Connections provide safe and direct pedestrian and bike access between existing neighborhoods, new development and station platforms.

### PUBLIC PROJECTS

<table>
<thead>
<tr>
<th>Project</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAIL TRAIL</td>
<td></td>
</tr>
<tr>
<td>Trail</td>
<td>$1,500,000</td>
</tr>
<tr>
<td>Bridges</td>
<td>$3,500,000</td>
</tr>
<tr>
<td>ENGLEWOOD PARKWAY ENHANCEMENTS</td>
<td></td>
</tr>
<tr>
<td>Protected Bikeway &amp; Streetscape</td>
<td>$1,750,000</td>
</tr>
</tbody>
</table>

**PUBLIC INVESTMENT TOTAL:** $6,250,000

### PUBLIC ACTION PLAN

**Required Steps**

**RAIL TRAIL and BRIDGES**
1) Negotiate Easement with RTD and BNSF
2) Prepare Rail Trail Concept Design
3) Prepare Contract Documents
4) Bid Project
5) Construct Project

**Who**
- City/RTD/BNSF
- City/Consultant
- City/Consultant
- City/Consultant
- City/Contractor

**ENGLEWOOD PARKWAY ENHANCEMENTS**
2) Prepare Bikeway and Streetscape Concept Design
3) Prepare Contract Documents
4) Bid Project
5) Construct Project

**Who**
- City/Consultant
- City/Consultant
- City/Developer
- City/Developer

---

*Englewood Parkway (Existing)*

*Englewood Parkway – Scenario 1 (with Protected Bikeway)*
NEIGHBORHOOD CONNECTIONS PROJECTS

- **RAIL TRAIL BRIDGE (DARTMOUTH AVE)**
  - Cost: $1 MILLION

- **RAIL TRAIL BRIDGE (HAMPDEN AVE)**
  - Cost: $1.5 MILLION

- **RAIL TRAIL BRIDGE (OXFORD AVE)**
  - Cost: $0.5 MILLION

- **ENGLEWOOD PARKWAY PROTECTED BIKEWAY ENHANCEMENTS**
  - Cost: $1.75 MILLION
The schedule calls for action on all projects within the first six years to ensure that plan momentum is established.

### Schedule

<table>
<thead>
<tr>
<th>PROJECTS</th>
<th>TIMELINE</th>
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<tbody>
<tr>
<td></td>
<td>YEAR 1-2</td>
</tr>
<tr>
<td>ALL STATIONS</td>
<td></td>
</tr>
<tr>
<td>REGULATORY UPDATES</td>
<td>Codes &amp; Guidelines</td>
</tr>
<tr>
<td>NEIGHBORHOOD CONNECTIONS (Rail Trail &amp; Protected Bikeways)</td>
<td>Program Design &amp; Construct</td>
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<tr>
<td>OXFORD STATION</td>
<td></td>
</tr>
<tr>
<td>OXFORD PARK-N-RIDE</td>
<td>Program Design &amp; Construct</td>
</tr>
<tr>
<td>OXFORD PARKS</td>
<td>Program Design &amp; Construct</td>
</tr>
<tr>
<td>ENGLEWOOD STATION</td>
<td></td>
</tr>
<tr>
<td>FLOYD AVENUE EXTENSION (West Neighborhood Development)</td>
<td>Program Design Construct</td>
</tr>
<tr>
<td>STATION ACTIVATION (Housing Over Park-N-Ride)</td>
<td>Program Design &amp; Construct</td>
</tr>
<tr>
<td>STATION ACTIVATION (Englewood Pkwy Extension)</td>
<td>Program Design Construct</td>
</tr>
<tr>
<td>ENGLEWOOD PARKWAY (East of Elati Street)</td>
<td>Program Design Construct</td>
</tr>
<tr>
<td>ENGLEWOOD PARKWAY (West of Elati Street)</td>
<td>Program Design Construct</td>
</tr>
</tbody>
</table>
COUNCIL COMMUNICATION

<table>
<thead>
<tr>
<th>Date</th>
<th>Agenda Item</th>
<th>Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 3, 2013</td>
<td>11 c ii</td>
<td>Interim Disinfection Improvements Project – Professional Services Agreement</td>
</tr>
</tbody>
</table>

INITIATED BY
Littleton/Englewood WWTP Supervisory Committee

STAFF SOURCE
Stewart H. Fonda, Director of Utilities
Chong Woo, Engineering/Maintenance Manager

COUNCIL GOAL AND PREVIOUS COUNCIL ACTION
Council approval of the 2013 Littleton/Englewood Wastewater Treatment Plan Capital Infrastructure Budget.

RECOMMENDED ACTION
The recommended action is to approve, by Motion, the agreement for Schedule A Task Order #14, with Brown and Caldwell for engineering support and design services for the Interim Disinfection Improvements Project located at the Littleton/Englewood WWTP based on the Brown and Caldwell Professional Services Agreement dated May 25, 2011.

BACKGROUND, ANALYSIS, AND ALTERNATIVES IDENTIFIED
The current disinfection system at the WWTP is a liquid chemical system using sodium hypochlorite (a strong bleach solution) to provide chlorine to disinfect the treated water and sodium bisulfate to remove the chlorine before discharging the water to the South Platte River. The system is the subject of two recent engineering reports.

The first report, prepared by Brown & Caldwell, was intended to evaluate the current system, evaluate alternative disinfection systems and to make recommendations regarding the future of disinfection at the plant. The recommendation of this report was to replace the chemical system with a system using ultraviolet light for disinfection. A project was begun to convert the current disinfection system to ultraviolet light disinfection.

The second report, prepared by CH2M Hill, was intended to determine if converting to ultraviolet light disinfection was required at that time. The report determined that the current chemical system is very complicated and that there is the potential (expressed in percent of the time) for exceeding permit limitations (i.e., permit violations). The report did not make any recommendations regarding the acceptability of permit violations, only that they might occur. The report did suggest several improvements to the current system that would reduce the potential for permit violations. The estimated cost for the improvements was projected at $1,200,000 and included:

- Modifications to the Oxidation Reduction Potential (ORP) Control System
- Modification to the Ammonia Bypass pumping system
- Installation of a new Chlorine Contact Tank (CCT) Flowmeter
- Modifications to the Denitrification (Denite) Backwash Tank
- Installation of a larger Centrate Tank to allow gradual return of centrate to the system.
As a result of the CH2M-Hill report, work on converting to ultraviolet light disinfection was stopped and the current disinfection system remains in operation.

Staff has developed a proposed scope of work for an Interim Disinfection Improvements Project needed to maintain the asset reliability of the existing system. Additionally, staff has evaluated the CH2M-Hill recommended improvements for inclusion into this project. The proposed Interim Disinfection Improvements Project includes:

1. Modifications to the ORP Control System *(recommended by CH2M-Hill)*
2. Modifications to the Ammonia Bypass pumping system *(recommended by CH2M-Hill)*
3. Installation of a new Denitrification Clearwell cover *(recommended by staff in lieu of CCT Flowmeter installation)*
4. Installation of additional instrumentation and controls for the Denitrification Filters *(recommended by staff in lieu of Denite Backwash Tank)*
5. Modification of the chemical feed piping and sampling system to improve reliability *(recommended by staff)*

Staff has determined to delay the CH2M-Hill recommendation to install a larger Centrate Tank and to reassess after the other improvements have been operated for a period of time.

A more detailed description of each modification included in this project is attached. Staff requested a proposal from Brown & Caldwell to perform the design of each of these modifications.

The engineering design is estimated to be $145,795, with an estimated total project cost of $1,290,000. Funds for the design are in the 2013 budget and the cost of implementation is included in the 2014 proposed budget.

**FINANCIAL IMPACT**

The amount is included in the 2013 Capital Infrastructure Budget and will be shared 50/50 by the Cities of Englewood and Littleton.

**LIST OF ATTACHMENTS**

Supervisory Committee minutes with scope summary
Task Order #14 Brown and Caldwell
MINUTES
SUPERVISORY COMMITTEE MEETING
July 18, 2013
8:15 a.m.

ATTENDING:  Michael Penny  Littleton City Manager
            Gary Sears  Englewood City Manager
            Rick Kahm  Englewood Public Works Director
            Stu Fonda  Englewood Utilities Director
            Jennifer Hunt  Hill & Robbins, P.C.
            Dennis Stowe  Manager, L/E WWTP
            Chong Woo  Engineering/Maintenance Manager, L/E WWTP
            Jonathan Bridges  Industrial Pretreatment Administrator, L/E WWTP
            Cindy Goodburn  Business Services Manager, L/E WWTP

Guests:     Mary Gearhart  Brown & Caldwell
            Jamie Eichenberger  Brown & Caldwell

SECTION III - TOPICS FOR DISCUSSION AND OR ACTION

1. Flows and Loadings
Stu Fonda reported that the measured flow to the Littleton/Englewood WWTP averaged 21.1 mgd in June, which is decrease of 0.5 from May. The measured flow split was 43.1 /56.9 between the cities of Littleton and Englewood.

ACTION TAKEN – None.

2. Compliance Reports
Stu Fonda reported that, in June, effluent quality had a 30-day average of 2 mg/L CBOD₅, 2 mg/L suspended solids, and 2.6 mg/L ammonia as nitrogen. All permit levels were met.

No spills occurred at the Littleton/Englewood Wastewater Treatment Plant in June 2013.

ACTION TAKEN – None.
3. **Fiscal Management**

Stu Fonda said that O & M expenditures, excluding capital, were $6,038,423 through June 2013, or 10.2 percent under the 2013 year-to-date budget. Year-to-date revenues, including industrial pretreatment and capital asset sales, equaled $95,771 through June 2013.

**ACTION TAKEN** – None.

4. **Industrial Pretreatment**

Jonathan informed the Committee that the Pretreatment Division conducted an inspection of the Rock Bottom Brewery in response to a call from Southgate Sanitation District regarding corrosion observed in manholes downstream of the facility. The Division has required Rock Bottom to complete an industrial wastewater permit application for the Division's review.

The Division also began an investigation of manholes in the South Park area in response to a request from the City of Littleton. Littleton maintenance staff had observed corrosion in several manholes along South Park Way; no obvious cause has been identified so far.

On June 28, Division staff responded to an incident at All Recycling, Englewood, during which several thousand gallons dark colored water with a chemical odor were being discharged from the facility's 'storm water treatment tank' into a Denver storm drain. This facility is situated in both Englewood and Denver, with the storm water treatment system and discharge in Denver. Division staff issued an immediate cease and desist of the discharge. The City of Denver and the Colorado Department of Public Health and Environment (CDPHE) collected samples and CDPHE conducted a site inspection.

**ACTION TAKEN** – None.

5. **Odor Reports**

Jim Tallent reported that no odor reports were received at the Littleton/Englewood WWTP during the month of April 2013.

**ACTION TAKEN** – None.

6. **Beneficial Use Program Update**

Jim Tallent reported that the Meier Farm lease has been reviewed, approved and signed by Gary Meier, in preparation for Littleton and Englewood Ordinance action in August 2013.

During the Meier Farm lease renewal process, it was discovered that an assessment of structures needed to be completed for the City of Englewood insurance policy. The existing structures were measured and photographed, and will be reviewed for appropriate action.

In conjunction with the Meier Farm structure assessment, the Byers farm barn was inspected by the L/E WWTP Safety Coordinator. Recommendations for improvement will be addressed by Beneficial Use staff.

**ACTION TAKEN** – None.
Supervisory Committee Meeting
July 18, 2013
Page three

7. Regulatory Programs – Status Report

Mary Gardner noted the Committee’s approval to proceed with the Integral contract for temperature evaluation for the next Hearing. Data evaluation and discussion will be the first step toward developing a proposed approach for that Hearing. She mentioned that Pueblo had received a permanent site-specific standard, and was hopeful of that possibility for the Littleton/Englewood plant.

The new storm water group met with Storm Water staff at the Colorado Department of Public Health and Environment this month to discuss shared concerns about the requirements of the storm water permits, such as safety and number of monitoring points, timing of sample taking, and duplication of requirements. The Wastewater Quality Control Division staff clarified some questions, and others will be addressed at a future meeting.

Mary attended the WESTCAS Conference last month, and presented a paper on the nutrient process and ultimate regulations that were adopted in Colorado. She said that Colorado now appears to be one of the models for nutrient regulations, and that she has been contacted by several people since her presentation.

Dennis Stowe announced that, after two and one-half years of effort, the EPA has approved the TMDL that the Barr-Milton Watershed group (including Littleton/Englewood) has been working on for the past ten years.

Dennis also reported that selenium has been an issue concerning the South Platte River for a long time. The temporary modification for Segment 14 will expire next year; if it is not renewed, Segment 14 could go on the 303D list for selenium. Centennial is proposing a study to develop site-specific limits for selenium, along with the Cities of Littleton and Englewood. The Committee agreed to offer support to that effort, which might include some staff and Laboratory time.

ACTION TAKEN – Michael Penny moved that the Supervisory Committee agree to offer support to Centennial and the Cities of Littleton and Englewood in their effort to develop site-specific limits for selenium. Gary Sears seconded the motion, and it carried unanimously.

8. CSU Cooperative Research Project Proposal for 2014

Dennis Stowe noted that Colorado State University (CSU) has submitted their 2014 proposal for the Cooperative Research Project on Land Application of Sewage Biosolids on dryland wheat. The 2014 study proposal includes the North Bennett farm site and the Byers farm site. An Earthworm/Hydraulic Properties Study was successfully completed and will be closed at the end of 2013. The total projected costs are $109,295 for 2014.

In addition to this proposal, L/E WWTP staff requested developing a new phosphorus (P) investigation to replace the earthworm study. The objective of this study is to gain an understanding of the properties of P in the western United States that affect P dynamics related to the land application of biosolids, such as plant available P, transformations of P in the soil over time, and the downward movement of soil P. Any change in the wastewater treatment process to reduce the concentration of P in the discharge to surface water will affect the concentration and potentially the forms of P in the biosolids. This research will allow for a proactive approach to P management and being better able to adapt quickly to future changes in biosolids regulations that affect P application and management. The projected initial cost of this investigation is $18,852. Since they also have an interest in this study, Metro Wastewater Reclamation District (MWRD) has offered to share in the P investigation project.
cost— the amount is not determined at the time of this writing. The combined cost for this proposal, pending shared cost with MWRD for the P study, is $128,147.

ACTION TAKEN—Gary Sears moved that the Supervisory Committee approve the 2014 Colorado State University proposal to continue the Cooperative Research Project on Land Application of Sewage Biosolids in Dryland Wheat, including the proposed Phosphorous investigation, in the amount of $128,147. Michael Penny seconded the motion, and the motion passed unanimously.

9. **Plant Gate Repairs and Replacement Project**

Chong Woo reported that, as part of the plant’s routine capital infrastructure projects, several main plant gates have been identified for needed repair and replacement. A total of 11 gates have been identified for repair and replacement (four-repair and seven-replacement). The Project was advertised on the Rocky Mountain E-Purchasing System (Bidnet), with the Bid Opening conducted on July 10, 2013. A total of three (3) Bids were received.

- Velocity Constructors Inc., Denver, CO: $312,163
- Stanek Constructors Inc., Golden, CO: $421,000
- RN Civil Constructors Inc., Centennial, CO: $438,000

Following the Bid Opening, Velocity Constructors Inc. formally requested to withdraw its Bid, citing a major oversight in the construction sequence and work scope that was not included in the original Bid price. The City of Englewood accepted the withdraw request.

Stanek Constructors Inc. was identified as the apparent low bidder. Chong said that, based on staff review, Stanek’s Bid is responsive and complete. Stanek is a general construction contractor specializing in water-wastewater projects that is well known in the industry, and qualified and competent to perform the scope of work for this project. The Project was budgeted, and the contract amount ($421,000) is available in the 2013 Budget.

**Supervisory Committee Meeting**
**July 18, 2013**
**Page four**

ACTION TAKEN—Michael Penny moved that the Supervisory Committee approve a construction contract with Stanek Constructors Inc., as the lowest responsive bidder, in the amount of $421,000 for the Plant Gates Repair and Replacement Project. Gary Sears seconded the motion, and it carried unanimously.

10. **Disinfection Project**

Chong Woo presented a proposed scope of work for a Disinfection Project. The purpose is to maintain the asset reliability of the existing Sodium Hypochlorite (Liquid Chlorine) equipment, until such time as the system will require upgrade to a newer technology (i.e., UV Disinfection). Equipment such as chemical tanks, pumps, and meters has approached the end of their useful lives.

In addition, staff has evaluated the recommendations from the 2011 CH2MHILL report that identifies additional improvements to the operation and reduces the complexity of the system. The CH2MHILL recommendations included control of programming modifications, modifications to the ammonia bypass pumping, installation of a new chlorine contact tank flow meter, and construction of a dedicated demin backwash tank.
At this time, staff anticipates the existing Sodium Hypochlorite system will be in place until construction to meet Regulation 85 requirements, currently estimated to begin in the year 2020. Staff has requested Brown and Caldwell to prepare a scope for engineering support and design services. The total cost for this project is anticipated to be approximately $1,290,000, which includes engineering, construction and administrative costs. The proposed Engineering (design) cost is $145,795.

**ACTION TAKEN** – Michael Penny moved that the Supervisory Committee approve a professional services agreement with Brown and Caldwell, in the amount of $145,795 for the Engineering/Design portion of the Disinfection Project. Gary Sears seconded the motion, and it carried unanimously.

11. **Lighting Replacement Project – Status Update**

Chong Woo said that the Lighting Replacement Project has been posted to the Rocky Mountain E-Purchasing System (Bidnet). The proposed project schedule is as follows:

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bid Opening</td>
<td>August 1, 2013</td>
</tr>
<tr>
<td>Supervisory Committee Approval</td>
<td>August 15, 2013</td>
</tr>
<tr>
<td>City Council Approval</td>
<td>September 3, 2013</td>
</tr>
<tr>
<td>Notice to Proceed</td>
<td>September 9, 2013</td>
</tr>
<tr>
<td>Final Completion</td>
<td>December 30, 2013</td>
</tr>
</tbody>
</table>

The project will consist of replacing aged and energy-intensive fixtures with newer and more efficient fixtures. As discussed previously with the Supervisory Committee, the technology proposed will be LED. LEDs provide a long lamp life, are more robust to withstand industrial applications, can handle cycling (timers and power losses), and are more environmentally friendly. Locations will include the Headworks Bldg, Primary Pump Stations 1 and 2, Tunnel Areas, and the Digester Complex. This project will be the first of a multi-year effort to replace all lighting within the facility. Chong anticipates a three-year effort to complete the plant lighting upgrades.

**ACTION TAKEN** – None.

12. **2014 Draft Littleton/Englewood Budget Overview**

Dennis Stowe introduced the 2014 draft budget, explaining that there are no significant changes in operation or maintenance anticipated in 2014. The areas of significant change are in personnel costs (increases in salaries and other personnel costs) and in routine capital expenses (replacement of the beneficial use trailers, the laboratory and several vehicles that are 10+ years old.) In addition, the plant will be filing a discharge permit renewal application, although no action is expected on the permit by the Water Quality Control Division for several years. These changes result in a draft 2014 budget that is approximately 6% above the 2013 budget. The items previously identified represent over 90% of this increase.

Dennis said that the infrastructure capital project budget continues at the same level as 2013. In addition, a disinfection project is being assembled based on the recommendations of the previous CH2M Hill report and the maintenance needs of the current system. The scope, schedule and cost estimate for the project is currently being developed. Costs for this project are not included in the draft budget.
ACTION TAKEN – None.

13. Hill & Robbins Report

Jennifer Hunt noted that she had enjoyed the Awards Ceremony Luncheon. She had an opportunity to talk with Senator Mark Udall’s representative, and exchange contact information with him.

ACTION TAKEN – None.

14. Schedule for the Next Supervisory Committee Meeting

The next Supervisory Committee meeting is scheduled for Thursday, August 15, 2013, 9:00 a.m., at the Littleton/Englewood Wastewater Treatment Plant.

Adjourned 9:55 a.m.
Purpose
The purpose of this project is to make improvements to the Littleton/Englewood (L/E) Wastewater Treatment Plant's (WWTP) disinfection system to increase the reliability of existing equipment. In addition, improvements recommended in the Technical Memorandum titled Assessment of the Existing Disinfection System at the Littleton/Englewood Wastewater Treatment Plant, dated August 1, 2011 will be addressed. These improvements include:

- Replacement of the ORP control system
- Reconfiguration and optimization of the ammonia bypass pumping system
- Reprogramming and improved monitoring of the denitrification filters to optimize backwash and speed-bump cycles
- Prevent algae growth in the denitrification filter clearwells to avoid impacting the chlorine contact tank (CCT) flowmeter.
- Improve redundancy and reliability of chemical feed and effluent sampling systems

ORP Control System
The current ORP control system is nearing the end of its useful life and requires replacement. The manufacturer of the unit, Strantrol, was acquired by Siemens, which is no longer supporting the Strantrol product line. Replacement parts are becoming more difficult to find, significantly reducing the reliability of the system. This project will identify an alternative ORP control system for installation at the L/E WWTP.

Ammonia Bypass
The L/E WWTP relies on effluent ammonia to produce chloramines for disinfection. Effluent ammonia from the WWTP is too low to reliably produce chloramines, so secondary effluent is bypassed around the tertiary treatment processes to maintain an effluent ammonia concentration of 1.5 to 2.0 mg/L. During summer months, secondary effluent ammonia is reduced due to unplanned nitrification in the secondary process. This limits the capacity of the existing ammonia bypass system. This project will explore both process and mechanical alternatives to address this issue.

Denit Filters – Monitoring and Control
Currently, when a filter enters backwash mode, effluent flow fluctuates by as much as 10 mgd. This sudden change in flow requires the chemical feed system to respond quickly. Lags in the system increase the risk of violation. This project will improve the monitoring and control of the denitrification filters to minimize the impact of backwash and speed bumps on the system by installing additional instrumentation and modifying the existing SCADA programming.

CCT Flowmeter
The CCT Flowmeter is a propeller-style meter. Algae in the effluent has been observed to accumulate on the meter, impacting control of the chemical feed system. The flowmeter is integral to the disinfection control system, and elimination of algae buildup is critical to maintaining reliability in the system. The source of the algae appears to be the denitrification filter clearwell. This project will construct a shade structure, and coat the interior of the clearwell to prevent algae growth and accumulation.

Chemical Feed and Sampling
The sodium hypochlorite piping is prone to scaling. The piping is paralleled for the majority of its route from the chemical feed building to the injection point; however, there are short sections of this piping for which there is no redundancy. This project will reconfigure the piping to provide full redundancy in the sodium hypochlorite feed system, allowing one pipe to be cleaned while the other remains in service. In addition, the sampling system in the Sodium Bisulfite Building requires modification. The sampling hose is difficult to remove and replace, and the sampling pumps are submersible units, which require frequent maintenance. This project will explore alternatives for replacing the submersible sampling pumps with dry units, and reconfiguring the sampling conduit to allow for regular removal and replacement of the sampling hose.
SCHEDULE A
Task Order 14 ENG.2013 – Interim Disinfection Improvements
Littleton/Englewood WWTP

STATEMENT OF WORK

1. GENERAL
The Littleton/Englewood Wastewater Treatment Plant (L/E WWTP) has requested Brown and Caldwell provide engineering and technical support to increase the reliability of the current disinfection system.

Upon execution of this Task Order, and effective as of August 15, 2013, the parties agree that Brown and Caldwell shall perform the following services listed below.

Brown and Caldwell’s services shall be governed by the Professional Service Agreement (PSA) dated May 25, 2011, together with this Task Order and any Exhibits attached hereto.

2. NAME OF PROJECT COORDINATORS
Brown and Caldwell’s project team is led by Sarah Reeves. Jamie Eichenberger is the Project Manager and project engineers will include Dan Clayton, Stephanie Fevig, and John Bratby. There may be isolated needs to engage other engineers and staff to complete work associated with this agreement, including subconsultant AMWEST (Fred Wilson) for SCADA system programming. The project staff for L/E are Greg Farmer and Don Ekstein with Chong Woo as the project manager.

3. PURPOSE FOR STATEMENT OF WORK
The purpose of this project is to make improvements to the Littleton/Englewood (L/E) Wastewater Treatment Plant’s (WWTP) disinfection system to increase the reliability of existing equipment. In addition, certain improvements recommended in the Technical Memorandum titled “Assessment of the Existing Disinfection System at the Littleton/Englewood Wastewater Treatment Plant,” dated August 1, 2011, will be addressed. These improvements include:

- Replace the ORP control system.
- Reconfigure and optimize the ammonia bypass pumping system.
- Reprogram and improve monitoring of the denitrification filters to optimize backwash and speed-bump cycles.
- Prevent algae growth in the denitrification filter clearwells to avoid impacting the chlorine contact tank (CCT) flowmeter.
- Improve redundancy and reliability of chemical feed and effluent sampling systems.

4. DESCRIPTION OF WORK PRODUCT AND DELIVERABLES
A detailed description of work products and deliverables is included in the attached Scope of Services.

5. SPECIAL TERMS
Consultant’s work product, which is prepared solely for the purposes of this agreement, including, but not limited to, drawings, test results, recommendations, and technical specifications, whether in hard copy or electronic form, shall become the property of Client when Consultant has been fully compensated as set forth herein. Design calculations and/or model runs developed for the work product shall be transmitted to the Client. Only final calculations, portable document format (PDF) images, or spreadsheet results shall be transmitted to Client for the work product requiring the use of proprietary models. Consultant may keep copies of all work products for its records.
6. **MODE OF PAYMENT/COMPENSATION**

All work shall be performed on a time and expenses basis in accordance with the PSA dated May 25, 2011. Time related charges are hourly billing rates and shall be the total hours worked on a task by each employee, multiplied by the employees' hourly billing rate. Overhead and profit are included in each hourly rate. Total cost for this Task Order shall not exceed $145,795 without additional written authorization. A detailed cost breakdown is attached. Rates for professional services shall be in accordance with Exhibit A – Project Rate Schedule. The current rate table is in effect until December 2013. At that time, Brown and Caldwell will propose an update, if appropriate.

7. **PAYMENT SCHEDULE**

City will pay Brown and Caldwell for their work upon deliverables as agreed by Owner and Consultant for the tasks in the attached Scope of Services. Monthly invoicing will document work completed for that invoice period.

8. **SCHEDULE**

Work will be performed in accordance with the attached project schedule.

9. **LOCATION OF WORK FACILITIES**

Substantially all of the work will be conducted by Consultant at its regular office located at: 1697 Cole Boulevard, Suite 200 Golden, CO 80401

Or the City will provide City office space and support, as appropriate, at the L/E WWTP.

IN WITNESS WHEREOF, pursuant and in accordance with the Professional Services Agreement between the parties hereto dated ______________, 20__, the parties have executed this Statement of Work as of this ______ day of ______________, 20__.

**CITY OF ENGLEWOOD, COLORADO**

By:  
(Signature)  
(Print Name)  

Title:  

Date:

**BROWN AND CALDWELL**

By:  
(Signature)  
Sarah K. Lord Reeves  
(Print Name)  

Title:  
Vice President

Date:  
Aug 13
# Exhibit A

## Littleton/Englewood Fee Schedule

<table>
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<th>Administrative</th>
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Littleton/Englewood Wastewater Treatment Plant
Interim Disinfection Improvements
Scope of Services

Prepared for
Littleton/Englewood WWTP
July 2013
Project Overview

The Littleton/Englewood (L/E) Wastewater Treatment Plant (WWTP) evaluated the disinfection system in 2010. The result of that evaluation was a recommendation to improve the system's reliability to ensure continued compliance with discharge permit effluent standards. A workshop was held with L/E staff on June 25, 2013 to identify required improvements and refine the scope of services shown below.

This Scope of Services includes the following phases:
- Phase 100 – Project Management and Administration
- Phase 200 – ORP System Improvements
- Phase 300 – Ammonia Bypass Pumping and Secondary Process Optimization
- Phase 400 – Denitrification Filter Improvements
- Phase 500 – Chemical Feed and Sampling Improvements
- Phase 600 – Document Production

Project Objectives

The following specific project objectives have been identified:
- Increase the reliability of the existing disinfection system.
- Improve monitoring and control of ammonia bypass pumping and denitrification filter backwash operation.
- Address deficiencies in the chemical feed, sampling, and flow monitoring systems.

L/E Responsibility

L/E shall provide to BC all available and relevant information to aid in the planning process. This includes, but is not limited to:
- Operational data.
- Knowledgeable staff who can discuss operational and maintenance issues.
- Timely review and comments within agreed upon schedules:
  - The accompanying schedule assumes review comments will be provided within 10 business days of submittal of technical memoranda and design documents.

Project Assumptions and Limitations

The following assumptions were made in the development of this Scope of Services:
- Only the feasibility of dedicated backwash supply will be investigated. Detailed design of this process is not included in this scope of work.
- The technical memoranda and design submittal packages will be revised once each, pursuant to L/E’s comments and suggestions.
- All technical memoranda and submittal packages will be reviewed within 10 working days of submittal.
- This scope of work is for preliminary design through design services only and does not include services during bidding or construction.
EXHIBIT A

- The work proposed will not affect design capacity and will not require a site application amendment or CDPHE involvement.
- Front-end specifications (Divisions 00 and 01) will be prepared by Littleton/Englewood.
- SCADA programming will not be completed in this phase. Rather, guidance will be provided in the specifications for completion during construction.
Detailed Scope of Services

Phase 100 – Project Management and Administration

1.1 Activities

Project Management and Administration includes the following activities:

- Project Management Planning
- Project Meetings and Workshops
- Project Control and Reporting
- Project Closeout

1.1.1 Project Management Planning

The Project Management Plan will document the key project information required by all project team members to assist them in executing the project to meet the required objectives: on time, on budget, high quality, and meeting L/E’s critical success factors. The key elements of the project plan are described below:

- Project Charter, which will establish the project goals, objectives, and critical success factors.
- Project team members, their roles, and responsibilities, including a staffing plan (management, engineering, QA/QC, etc.)
- Scope of Services with work breakdown structure
- Project schedule updates will be provided in monthly progress reports if changes have been made and agreed upon by L/E
- Project budgets
- Communications Plan
- Risk Management Plan
- QA/QC Plan
- Project documentation plan and file structure
- Change management process
- Health and Safety Plan for field work, if applicable

1.1.2 Project Control and Reporting

Monthly invoices will be prepared and submitted to L/E in an approved format. Invoices shall include:

- Total contract amount
- Total charges to date
- Previous billings
- Outstanding balance
- Current amount remaining
- Total amount due

This task also includes periodic project review by BC management to assure that the project is meeting L/E’s critical success factors, is on schedule, and within budget.
EXHIBIT A

1.1.3 Project Meetings and Workshops

BC will meet with L/E every month to review project status, coordinate project activities, obtain direction, and answer specific questions relating to the project. Two members of the consultant team will participate. The budget includes travel to six monthly meetings over the course of the project. Conference call updates will be held, as needed, between monthly progress meetings.

1.1.4 Quality Control and Deliverable Production

This activity includes internal quality control review for all technical memoranda, calculations and process models.

1.1.5 Project Close-out

During project close-out, BC will resolve all final invoices to L/E, consolidate and archive all project files, and meet with L/E to review the project performance and achievement of project objectives.

1.2 Deliverables

The following deliverables will be provided as part of this phase:
- Project Management Plan (which includes the QA/QC plan)
- Monthly invoices
- Meeting agendas, presentation materials, and minutes

Phase 200 – ORP System Improvements

2.1 Objective

Reportedly, the existing Strantrol oxidation-reduction potential (ORP) system is no longer being supported by the manufacturer and spare parts are limited to those currently in inventory from Siemens. While this system has operated adequately in the past, the lack of product support and limited supply of spare parts has made its continued reliability uncertain. A new ORP control system will be installed to replace the existing system.

2.2 Activities

2.2.1 Identify and Evaluate ORP Control System Alternatives

BC will work with L/E staff to determine the required features for the new ORP control system. Up to four alternatives that meet these criteria will be identified and evaluated, and a final recommendation provided.

2.2.2 Prepare Technical Memorandum

A technical memorandum (TM) will be prepared to summarize the product requirements, identify alternatives, report on the evaluation of the identified ORP control systems, and recommend alternatives. Cut sheets of the recommended equipment will be included in the appendix of the TM.

2.3 Deliverables

The deliverables for this phase of the project will include draft and final technical memoranda.
EXHIBIT A

Phase 300 - Ammonia Bypass Pumping and Secondary Process Optimization

3.1 Objective
The L/E WWTP sets a target effluent ammonia concentration of 1.5 to 2.0 mg/l to ensure adequate ammonia is available for chloramine disinfection. Currently, the ammonia bypass pumping system is not able to provide adequate flow to maintain this effluent concentration during summer months. In the summer, the solids contact tanks (SCTs) appear to be nitrifying, reducing the secondary effluent ammonia concentration available for bypass. This requires substantially higher bypass pumping rates than the system was originally designed for. A combination of increased pumping capacity and process optimization during summer months will alleviate this issue, allowing for more reliable disinfection.

3.2 Activities

3.2.1 Review Operations Data
Operations data will be reviewed to determine a baseline for design of the ammonia bypass system. The review will establish average, maximum, and minimum ammonia concentrations in the secondary effluent during different times of year to determine the required pumping capacity. A sensitivity analysis will be conducted as part of this phase to determine the impact of ammonia concentration on bypass pumping rates.

3.2.2 Hydraulic Modeling and Design
Once baseline ammonia concentrations and subsequent pumping rates have been established, the bypass system hydraulics will be evaluated to determine what improvements are required to maintain an effluent ammonia concentration of 2.0 mg/l. In addition, the size and type of flow control valve will be evaluated to identify alternatives for improved turndown of the system.

3.2.3 Process Optimization
A BioWin model of the secondary process will be developed to assist in optimization of the secondary process. The purpose of this task is to identify operations strategies that will reduce or eliminate nitrification in the SCTs, raising secondary effluent ammonia concentrations. This will, in turn, reduce the amount of bypass pumping required to maintain an effluent concentration of 2.0 mg/l. In addition, reducing or eliminating nitrification in the SCTs will provide more consistent loading to the nitrifying trickling filters, which should result in better overall plant performance. This will be necessary in the future as Regulation 31 comes into effect.

3.2.4 Prepare Technical Memorandum
A TM will be prepared to summarize current operation, the impacts of nitrification in the SCTs on the ammonia bypass pumping system, hydraulic considerations, and process optimization strategies. Recommendations for improvements will be provided.

3.3 Deliverables
The deliverables for this phase of the project will include draft and final technical memoranda.
Phase 400 – Denitrification Filter Improvements

4.1 Objective

Operation of the deep bed (Tetra™ Denite™) denitrification filters results in significant and sudden changes in the effluent flow, up to 10 mgd, during backwash and speed bump events. This sudden change in flow requires the chemical feed system to rapidly change flow rate to maintain disinfection and dechlorination, increasing the likelihood of violation. This phase will investigate alternatives to minimize fluctuations in effluent flow including construction of dedicated backwash supply and improved instrumentation to help predict and control these events.

In addition, the chlorine contact tank flow meter has been experiencing failures due to algae buildup. To mitigate this issue, a shade will be installed on the filter effluent clearwell.

4.2 Activities

4.2.1 Evaluate Dedicated Backwash Supply

Operations data will be reviewed to identify the amount and frequency of backwash and speed bump cycles. These data will be used to develop an equalization volume for a dedicated backwash supply. Planning level costs will be developed for the equalization basin to determine if this would be a feasible alternative.

4.2.2 Instrumentation and Programming

Design instrumentation and programming for the denitrification filters will be modified to provide additional data and control. Ultrasonic level sensors will be added for each filter, and data returned to the SCADA system. Active control of backwashes and speed bumps will not be considered as part of this project.

The existing SCADA system will be modified to allow for the following:

1. Allow backwash and speed bump frequency to be set for each filter. Filters are run in different modes (denitrification vs. filtration) which require different frequencies.
2. Add level information to the SCADA display and historian for the new level sensors.
3. The existing backwash float will be retained for backup and/or alarm use.

4.2.3 Clearwell Improvements

Brown and Caldwell will design shades to limit algae growth in the denitrification filter clearwells, thereby lessening algae buildup on the chlorine contact tank (CCT) flow meter. Routine maintenance of the clearwells requires entry, so covers will not be considered as they would make the space a confined space. Rather, a shade system will be provided to reduce sunlight, while preventing the clearwells from being classified as a confined space. In addition, the clearwell will be coated with an algae-resistant coating system.

4.2.4 Prepare Technical Memorandum

A technical memorandum will be prepared to summarize the feasibility and sizing of a dedicated backwash supply, instrumentation and controls improvements, and clearwell improvements. Improvements recommendations will be included.
4.3 Deliverables
The deliverables for this phase of the project will include draft and final technical memoranda.

Phase 500 – Chemical Feed and Sampling Improvements

5.1 Objective
The L/E WWTP is experiencing scaling in the sodium hypochlorite feed piping. While portions of the pipeline are paralleled, the single pipeline branches are unable to be taken out of service to be cleaned. Piping modifications should be provided to allow for full redundancy, allowing one side to be isolated and cleaned, while the other is still in service. Scaling issues are downstream of the carrier water addition, which is required to reduce retention time in the chemical piping. Softening of the carrier water (generally recycled plant effluent or “3 water”) will not be considered for this project.

In addition, the sampling pumps at the Sodium Bisulfite Building (SBS) aren’t working as intended. The hose conduit between the sampling manhole and building needs to be replaced to allow for removal and replacement of the sampling hoses. In addition, the sample pumps are currently submersibles, and require frequent repair and replacement. These pumps will be evaluated to determine if they should be replaced by a sampling pump that sits on a shelf mounted to the manhole wall to keep them out of the flow stream or possibly some other configuration.

5.2 Activities

5.2.1 Redundant Sodium Hypochlorite Piping
The sodium hypochlorite piping between the carrier water feed and injection point will be paralleled for full redundancy and to allow one side to be taken out of service and cleaned while the other remains in service. In addition, pressure transducers will be installed on the discharge line and tied into SCADA for monitoring and alarm to alert operations and maintenance staff when the lines are scaling and need to be cleaned.

5.2.2 Replace Sample Line Conduit
The conduit that houses the sample lines between the manhole and SBS Building does not allow the sampling hoses to be removed and replaced. The conduit will be replaced, upsized, and provided with long-radius fittings to promote removal and replacement of sampling hoses.

5.2.3 Replace Sampling Pumps
The existing sampling pumps are submersible units due to the long suction line that would be required for more traditional sampling pumps. These pumps will be replaced with peristaltic sampling pumps, mounted on a platform located in the sampling manhole, above the flow path.

5.3 Deliverables
No specific deliverables are associated with this Phase.
Phase 600 – Design Documents

6.1 Objective
Extend preliminary design concepts developed in the prior phases and prepare design drawings and specifications to support implementation of recommended improvements.

6.2 Activities

6.2.1 Prepare 60% Documents
BC will prepare a table of contents for specifications, and 60% drawings. Specifications and drawings will be delivered electronically in PDF format for review.

6.2.2 Prepare 90% Documents
BC will prepare 90% specifications and drawings. Specifications and drawings will be delivered electronically in PDF format for review.

6.2.3 Prepare Final Documents
BC will prepare final specifications and drawings. Specifications and drawings will be delivered electronically in PDF format. One full-sized and three half-sized sets of drawings will also be delivered.

6.3 Deliverables
- 60% specifications and drawings
- 90% specifications and drawings
- Final specifications and drawings
**EXHIBIT B**

**Littleton/Englewood Fee Schedule**

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